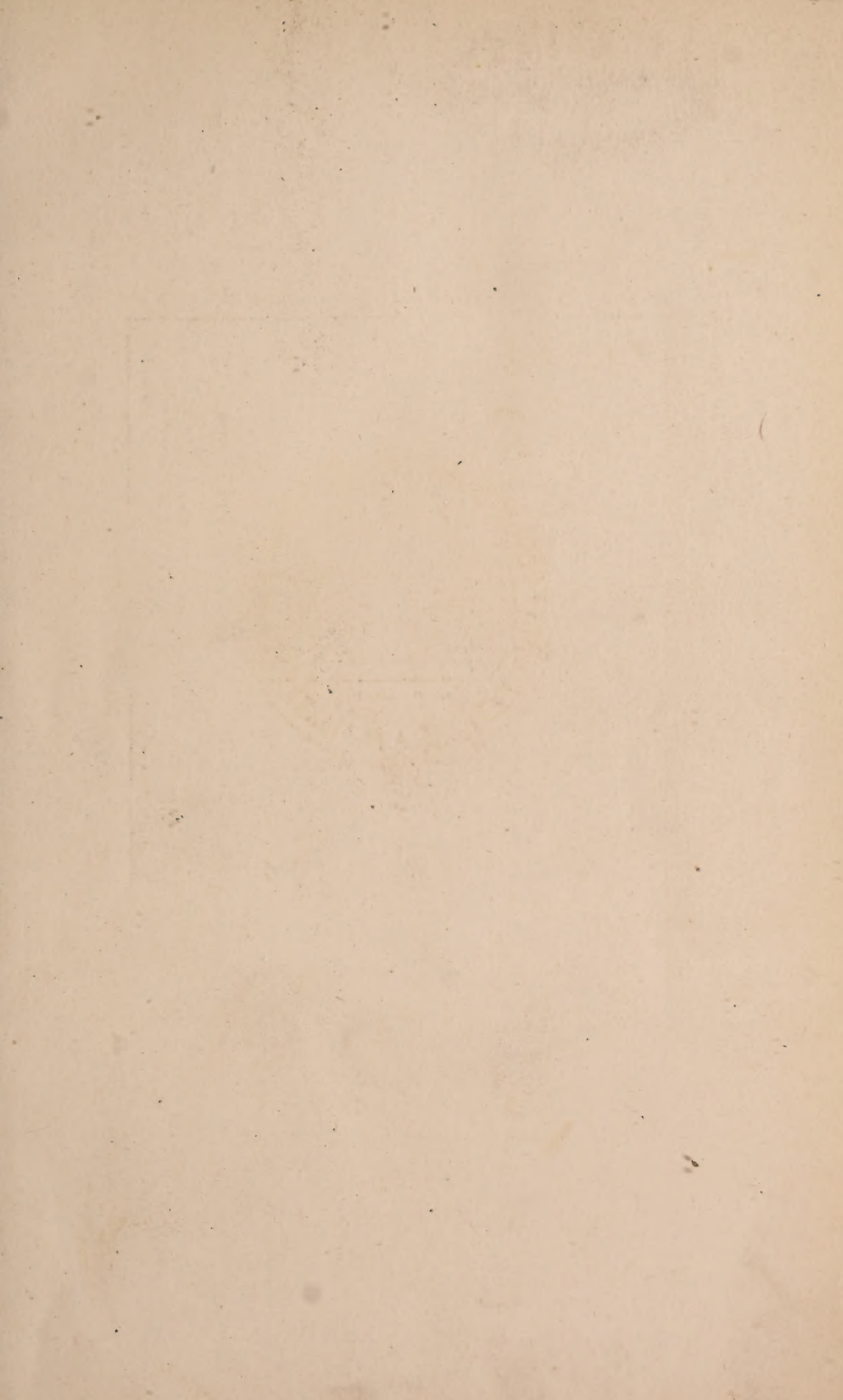
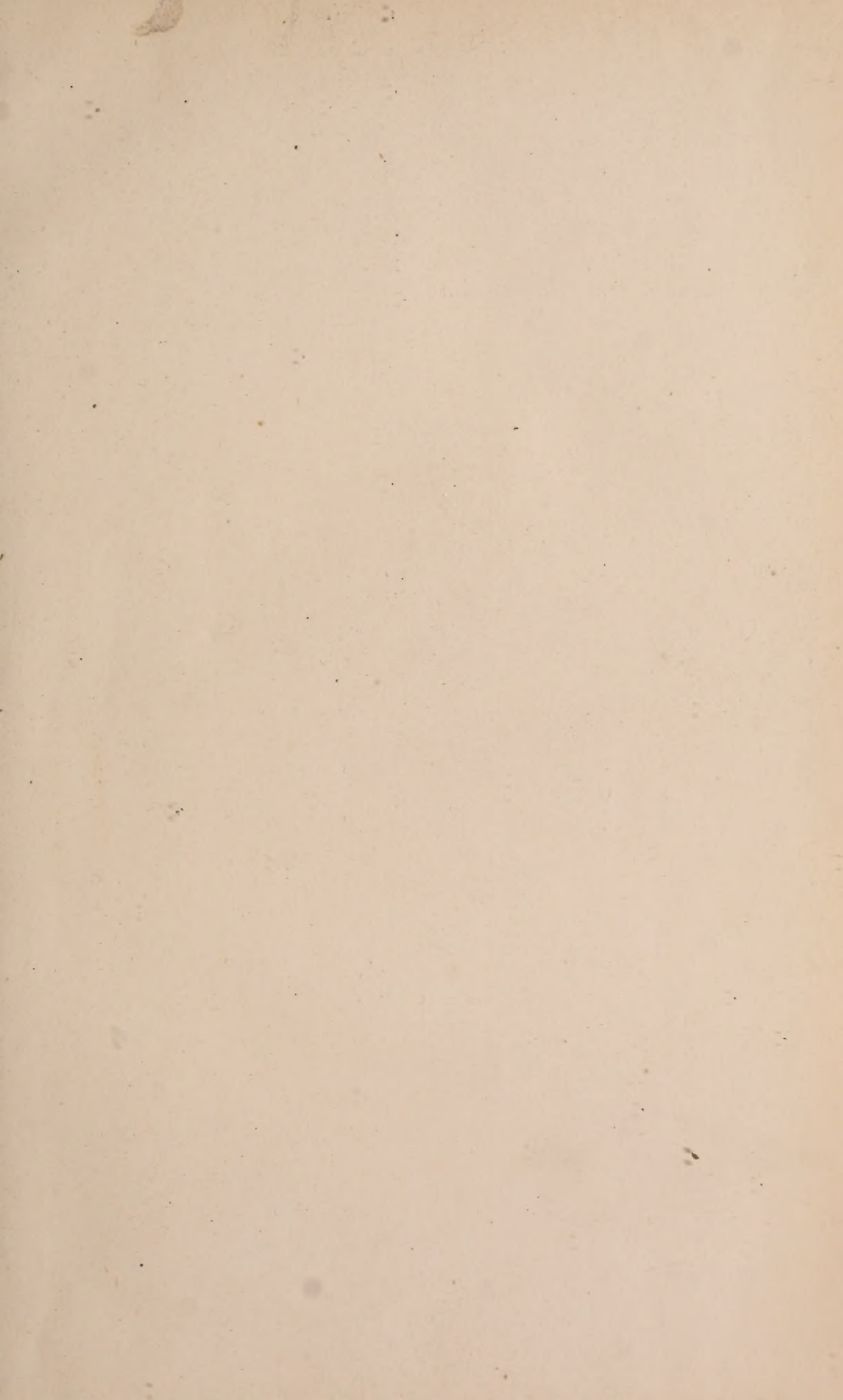



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VOL. VI.

[Whole Number, 61.]

NO. 1.

RICHMOND, APRIL, 1879.

THE
VIRGINIA
MEDICAL MONTHLY,

LANDON B. EDWARDS, M. D.,

EDITOR AND PROPRIETOR.

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VIRGINIA MEDICAL MONTHLY.

VOLUME VI—No. 1.

WHOLE NUMBER, 61.

RICHMOND, APRIL, 1879.

Original Communications.

ART. I.—**New or Unappreciated Aids in the Treatment of Strumous Disease.** By HORATIO R. STORER, M. D., Newport, R. I., President of the Gynæcological Society of Boston; Past Vice President of the American Medical Association, etc. (Read before the Gynæcological Society of Boston at the 96th regular meeting, November 7th, 1878.)

In former communications to the Gynæcological Society and to the American Medical Association,* I have endeavored to contribute to our practical knowledge and therapeutic control of strumous disease. I now desire to make some brief suggestions concerning the use of certain simple measures, easily available by the practitioner, and quite sure to be found of service, but some of which have not as yet obtained the general recognition that they deserve. Two of them, at least, will be of interest to gynæcologists, by whom the inter-dependence of pulmonary and uterine conditions, both in health and disease, is fast becoming understood.

1st. AS TO RESIDENCE.—While we find diseased heredity, and other causes of debility that act upon the individual, existing everywhere throughout the world, there can be no doubt of the efficacy in the treatment of struma of a strongly saline atmosphere. To this is chiefly owing the benefit from long sea voyages, even allowing for the regular diet, freedom from social dissipation, etc., that are involved. Merely living upon the sea-coast, at haphazard, does not necessarily produce

**Boston Medical and Surgical Journal*, June 27, 1878; *Transactions American Medical Association*, 1878.

the effect. The more completely insular the situation, the more decidedly saline is its atmosphere. The more complete and constant the exposure to this salt atmosphere—to obtain which, if care is used in selecting the place of residence, is perfectly consistent with protection from harsh winds—the greater is the likelihood of relief.* Indeed, it has been found that, within a zone bounded by less than five hundred feet from the sea margin, there exists the limit of greatest saturation, as evidenced by the rime, not merely from spray, deposited upon house windows, fences and the like, and by direct analysis of the air itself. It must be recollected that it is not alone the chloride of sodium that is volatilized. There can be no doubt that it is to the practical insularity of Mentone on the Riviera, and of Bournemouth and Torquay, on the south coast of England, just as at Shanklin, and the Undercliff at Ventnor, in the Isle of Wight, that is

*Facts like the following corroborate the above statement :

Rhode Island has a larger proportion of its territory directly bordering upon salt water than any other State in the Union. The neighboring Massachusetts touches the sea at two of its margins, but the mean annual temperature of the water at the greater of these is much lower than in Rhode Island, which is within the influence of the Gulf Stream. This latter point is proved by the sub-tropical character of its marine plants and animals, as compared with those north of Cape Cod. The following are the comparative statistics of deaths from consumption in these adjacent States :

RHODE ISLAND (Dr. Snow, of Providence, *Twenty-fourth State Registration Report*, 1876):

Year of census.	Population.	Deaths from consumption	—Of the living population.—	
			One in every	In each one thousand.
1860.....	174,620.....	503.....	347.....	2.88
1865.....	184,965.....	547.....	331.....	2.96
1870.....	217,353.....	575.....	378.....	2.64
1875.....	258,239.....	650.....	397.....	2.52

MASSACHUSETTS (*State Registration Report* for 1875):

Year of census.	Population.	Deaths from consumption.	—Of the living population.—	
			One in every	In each one thousand.
1860.....	1,231,066.....	4,557.....	270.1.....	3.70
1865.....	1,267,031.....	4,661.....	271.8.....	3.68
1870.....	1,457,351.....	5,003.....	291.3.....	3.43
1875.....	1,651,912.....	5,738.....	287.9.....	3.47

“It will be noticed that the proportion of mortality from consumption, to the living population in Massachusetts, is constantly considerably greater than in Rhode Island.” (*R. I. State Reg. Rept.*, 1876, p. 301.)

An equally significant fact is discovered in comparing the different portions of even so small a State as Rhode Island. Providence is its chief northern city. Here the waters of Narragansett Bay are much less salt; though still tidal, they are diluted by the fresh water of rivers. The other capital, Newport, is in the South, and, in reality, far out at sea. Now, from the State Registration Reports of Rhode Island, it appears that there is distinctly a less comparative mortality from consumption at Newport than at Providence.

owing much of the benefit of these famed local climates. Artificially, away from the sea, these conditions may be partially imitated by the atomization of sea water.

2d. AS TO DIET.—In general terms, the employment of fish and other products of the sea, Irish moss or carrageen included, have been frequently eulogized in the treatment of strumous cases. I think, however, that greater attention might be given, in this direction, to matters of detail. We are all of us, for instance, satisfied as to the merits, as a medicine, of cod liver oil; but we do not sufficiently appreciate that with a little judicious training of the patient, it may be made an actual article of food. The fresh livers themselves, from which the oil has or has not been extracted, and cooked in a variety of ways, are not unpalatable. Indeed, to many invalids, this method of taking the oil would seem the preferable one. Of this I speak from personal knowledge.

Then there are sea fishes—pre-eminently the various species of herring, including shad, the alewife, menhaden, etc.—in which not the liver merely, but the whole body, is saturated with oil. I do not hesitate to recommend these, especially the latter, menhaden, as a valuable addition to the diet table, and an efficacious means of treatment.

Besides these sources of oil, we may utilize the fresh roes of many sea fishes. I may mention perhaps especially that those of the cod are a most delicate and delicious article of food, indicated like all other eggs, for special reasons, in the cases of which I am speaking.

3d. AS TO MEDICINE.—To what I have said of cod livers and their oil, I may add that a foreign writer has lately asserted that equal, if not even greater, value is to be found in the liver of the skate. This fish is frequently taken upon our seaboard, and is ordinarily thrown aside as worthless. There are also species of shark, the livers of which, abounding in oil, would, in practice, probably be found to be useful. It is not unlikely that the prejudice that has hitherto been excited against them by the makers and vendors of cod liver oil is, in reality, unfounded, and has been availed of for the purpose of keeping up the market price of the so-called genuine article.

4th. AS TO EXTERNAL APPLICATIONS.—From oil inunction every physician has obtained benefit, who has taken the trouble to see that it was faithfully employed. Ordinarily, olive oil has been ordered, on the ground that it is cleaner. I am quite sure, however, that in fish oils, the odor of which, when prepared and kept with care, is no worse than many remedial agents that are constantly prescribed, we have a drug of greater specific power. Their price, especially the oil of menhaden, as compared with that of the olive, is much less, and on this account is of importance, certainly in hospital and dispensary practice.

Sea water is so easily procured, so close at hand to many of our profession, that we are apt to forget that it is, in reality, a "mineral water" of exceeding value. Let the same, or very nearly the same formula be discovered in any spring existing inland, as is the case with some of the most famous health resorts in this country and Europe, and language in praise of it is exhausted by medical men; but then this sea water is so very common. Allowing for all the benefits that change of air, of diet, of scene, and of thought have for an invalid brought to the sea side, there yet remains, and prominently, the effect of the sea bathing; and this, too, where the water is still, and the stimulating shock of surf is absent.

Much of the advantage to be derived from sea water, can no doubt be obtained from its natural salt, procured by evaporation, which the skill of the chemist has in vain tried to imitate. It is now somewhat difficult to obtain real sea salt, as almost all the evaporating vats along the coast have been allowed to fall to pieces since the general use of rock salt, and that from salt springs; but it would be for the advantage of invalids were it and sea water added to their list of necessities by druggists and country physicians. A pint of sea water, or half an ounce of sea salt dissolved in a pint of rain water,* will, if used with care, furnish an abundant sponge

* The water of the Atlantic contains, according to the but slightly varying analyses of Bouillon Lagrange and Vogel (*Annales de Chimie.*, t. LXXXVI, p. 190). Schweitzer (*Philosophical Magazine*, July, 1839), Figuier and Mialhe (*Journal de Chimie. et de Pharm.*, t. XIII, 1848, p. 407), and Marcet, a total of from thirty to forty grammes of the chlorides of sodium, potassium and magne-

bath. Careful analysis of the true and factitious sea salts may seem to give identical results, but in effects the latter will be found to be lacking in a certain something that is possessed by the former.

Sea water, it may here be said, has the same advantages as other mineral waters, where indicated for internal use. In an over-dose, like them, it will vomit and purge. In more reasonable quantities it produces, like them, a tonic, alterative, resolvent, deobstruent effect.

When used as a bath, there are many methods, usual and unusual, by which to employ sea water for strumous cases. I have spoken of the possibility of producing a temporary and local saline climate by its atomization. Here, in reality, we bathe and stimulate the respiratory mucous membrane, as well as obtain medicinal absorption thereby. In precisely the same way, by the atomizer, by the direct douche, and by the "internal soak," as it may be termed, where the cavity is partially filled, and allowed to remain unemptied for a considerable period of time, the rectal, vaginal, and even vesical coats may, for various indications, receive sea water applications.

In studying the therapeusis of struma in Southern France and in Italy, I made frequent employment, externally, of an emulsion of sea water and olive oil. There could be no doubt whatever as to the effect produced. Of this I repeatedly wrote to Dr. Warner, of Boston, during the years 1873-7. I should now expect to find as good results from a similar emulsion of sea water and fish oil.

For any medicinal purposes, I need hardly say that the sea water should in reality and invariably be taken from the sea, and not from foul creeks and estuaries, especially in the neighborhood of large cities.

Again, in sea mud, deposited in tide eddies and slack water, we have another most valuable means of treating a patient externally; and even internally, in pelvic affections, by the vagina. In collecting this mud, still greater care than

sium, the sulphates and carbonates of magnesia and lime, the oxides of iron and manganese, bromide of magnesium, ammoniacal salt and iodine, to the kilogramme (1000 grammes). The above quantitative formula is, therefore, very nearly that existing in nature.

with the water is necessary, to avoid all chance of pollution from the filth of factories and sewage. Used hot, as a poultice, the mud of certain mineral springs has long had repute in the treatment of indolent tumors and subacute inflammations. I have seen instances of its effect, and indeed had practical illustration upon my own person, at the hot springs of the island of Ischia, between whose deposits and those of the sea there is no very essential difference. The sea mud may also be dried, and, after pulverization by the fingers, used in this condition, thus approximating to the method of Dr. Addinell Hewson, of Philadelphia; or it may be again moistened by hot water or by steam, and applied as a poultice; or allowed to stiffen like a plaster bandage, thus indefinitely prolonging its medicinal effect as an alterative and stimulant.

Finally, a large proportion of the iodine of commerce is still produced from sea weed. I have long been convinced that in the various algæ (kelp, rock-weed, etc.), of which, occurring upon the south coast of New England, Dr. Farlow, of Cambridge, has catalogued no less than one hundred and three different species, we have a hitherto unused means of assisting in the treatment of strumous disease. It would have seemed unreasonable but a very short time ago to have sought in the foot-stalk of kelp or sea-tangle (*laminaria*) for one of the most efficient materials for uterine tents. I venture to predict that these neglected sea weeds will be found useful by the profession for a variety of indications, in the treatment of strumous disease. They may be used entire or comminuted, and hot or cold, as poultices. Crushed and soaked in sea or fresh water, they afford an easy and efficient form of medicated bath, general or local; and when they are treated understandingly by the pharmacist, we may expect that new and valuable preparations, to be recognized as such by the profession, will be obtained. Indeed, just as cod liver oil, of more worth than much of that in the market, may be extracted from the fresh livers by any housewife over her kitchen fire, it is probable that efficient infusions, etc., of algæ, of greater value than the much vaunted "sea-weed tonics" of empiricism, may be prepared in the same homely way. This is as true of the fresh carrageen, recently torn from the

rocks, as of the other algæ. As sold by grocers and druggists, the carrageen of the market has not only lost some of its chemical value during the processes of drying and bleaching, but it often has also undergone partial decomposition. I have tested the green carrageen, gathered alive, upon my own table, and have found it excellent.

In the presence of consumption and equally fatal forms of strumous disease, and indeed in many other constitutional conditions familiar to the gynæcologist and general practitioner, we cannot wonder that simples like these are so often employed by the friends of the patient, to the neglect of our own more costly prescriptions, and we do well if we ourselves try to utilize and direct them. In this belief, I have suggested to one of the Newport fishermen, Mr. James O. Swan, that he make the experiment of supplying to the profession these various sea products, in fresh and reliable condition, and at prices that will merely remunerate him for his time and labor. To do this, it is my impression, has never, as yet, been systematically attempted by any one in this country.

ART. II—**Clinical Remarks on Hæmorrhages in Malarial Cachexia.** By ALFRED G. TEBULT, M. D., Ex-President and Honorary Fellow of the Medical Society of Virginia; Honorary Fellow of the Abingdon Academy of Medicine, etc., London Bridge, Va.

It has long been known that paroxysmal fever occurring in malarial dyscrasia may be accompanied by hæmorrhages or discharges of more or less altered or depraved blood from various organs, and that such complications are merely the local expression of a general condition. These discharges, usually atonic in their nature, proceed from the internal surfaces of relation, and are determined as to their site by certain remote or local causes. Among these causes may be enumerated parabysmic enlargements of the chylopoietic viscera; the compression exerted by them, aided by the force of the diaphragm and the repletion of the stomach; congestion, stasis, varicose intumescence; the morbid condition of the sanguineous mass; the action of irritants on the parts in-

volved, and febrile movements. They are thus found to be symptomatic, either of change of structure in the vessels themselves, in the membranes, which are the seats of effusion, or of obstruction in a more remote organ that disturbs the equilibrium of the circulation.

The general characteristic of malarial cachexia having been described in former publications, it is not now necessary to specify them at large or to treat of any other tendency or complication than the hæmorrhagic, prefaced by a few etiological topics which bear directly on the subject matter of these clinical remarks.

The first consideration is due to the changes undergone by the blood from malarial poisoning as eventually in themselves potent factors in predisposing to hæmorrhages. While it is the exclusive province of chemical pathologists to ascertain and define with precision the alterations of the animal fluids, and while much has been done to enlarge our knowledge in this department, it is still to be regretted that we are far from having arrived at any exactitude of knowledge as to the morbid conditions of the blood in malarial diseases. The subject is one of great difficulty, and can only be approached by those who are at the same time profound chemists and eminent physicians; for metamorphoses, which are often progressive or consecutive, must first be duly appreciated at the bedside, and afterwards in the laboratory. In default, then, of this precise process, some value may yet be attached to careful clinical investigations, assisted by such means as opportunities may present, although the results attained should be qualified by conscious diffidence.

From such researches in chronic malarial cachexia, the blood, in regard to its general physical qualities, will be found inordinately thin; imperfectly disposed to coagulate; of a color, both in the arteries and veins, darker than usual, except in a few instances when it is pinkish and limpid, as in the last stage of prolonged epistaxis. The serum often still entangles some coloring matter, and when the clot is very dark, is apt to be of a deep yellow—a color of which the skin of the patient partakes to some extent.

Although Andral and Gavarret, as still quoted, have de-

monstrated in intermittent fever, rather a tendency to hyperinosis than hypinosis, yet from a group of observations in malarial cachexia, it has seemed to me, the reverse might clearly be predicated as a rule, in these instances. The exceptions evidently were when an increase of fibrin indicated the presence of phlegmasia; and this occurred whenever congestion of organs proceeded to inflammation, as did happen at times, even in very chronic cases. A little reflection will show that this is what might have been anticipated; and accordingly, on examination, the proportion of fibrin was found to be normal or above the normal rate at the beginning of the malarial fevers, and so long as a phlogistic tendency existed, but was very apt to diminish with the duration of the fever, and certainly in the assumption of a decided cachectic condition. It is here worthy of notice, that mere enlargement of the spleen did not seem to have a direct agency in defibrinating the blood.

But the most remarkable phenomenon attending the prolongation of the cachectic taint, was a diminution of the blood corpuscles with a progressive enfeeblement of the system, while, *pari passu*, the proportion of water increased. Besides this spanæmia, the alkalinity was reduced below the normal standard.

Further researches were much facilitated by a strict interrogation of the human organism, in itself a nice philosophical instrument, which affords tests of the utmost practical value. In this mode, and by plain induction, other depravations of the blood could be referred to impaired aëration; secretion, nutrition and eremacausis through materials absorbed, uneliminated or catalytic. Thus, in brief illustration, besides the well-known carbon contamination, the excretion of urea will be found in direct proportion to the animal heat evolved. During the reign of phlebotomy, the morbid manifestations of the blood were oftener than at present forced upon the attention of the student, who was then taught it a heresy to doubt the doctrines of pure solidism, although nature contradicted at each step much of the didactic instruction in vogue. The alterations of the blood were often very remarkable. In brief illustration, it was seen to flow in dark,

sluggish streams; to present a tarry consistence; to ooze out, thin and striated, with scarcely a jet; to resemble lees of wine; and, in this cachexia, when hydraemia predominated, it had lost a considerable portion of its coloring material.

At the present stage of our knowledge, whether the first impression be made on the blood or on the nervous apparatus, so long as the inner temple is impenetrable, the observer at the bedside must be content to deal with evident effects, and base a rational medicine on legitimate inductions from well ascertained facts. If we may not be able to neutralize the poison, we can at least act in accordance with the teachings of nature—promote its elimination. But we should not rest satisfied with present attainments; for to disinfect the person of the fever poison, and not merely the locality, is the great problem whose solution is to be determined in the future.

C. H. Parry long since demonstrated the action of morbid blood upon the capillaries and their elective power. Other observers followed him. The impression so made is most rapid in the arterioles and less so in the venules. To this influence may be traced much of the engorgements so characteristic of malarial poisoning. Other effects follow: A diminution of fibrin induces muscular pains of the limbs, violet spots of the skin and scorbutic bleeding; and when ill health is long continued, may end in scorbutic dysentery. A loss of blood corpuscles tends to adynæmia from want of a due relation of the blood with the nervous centres. The congestions existing in malarial cachexia are apt to be passive. They have a constant tendency to increase and encroach upon new points, thus adding to the risk and danger of the patient.

Superadded to the stagnation within the capillaries, their impaired contractility and a want of plasticity of the blood, a powerful occasional cause of hæmorrhage is to be ascribed to the pressure excited on the venous trunks and a want of freedom to the circulation through the hepatic radicles of the vena portæ and the right cavities of the heart. Mechanical obstruction to the circulation is so frequent a source of derangement, that a simple allusion to its *modus operandi* is alone necessary: First, by reference to the effects of pressure of the gravid uterus upon the iliac veins, which may induce

anasarca or varices of the inferior extremities, distending these veins to spontaneous rupture and hæmorrhage; and secondly, to hæmorrhoids as one of the results of oppressed portal circulation. As most practitioners are aware, already existing compressions on the vena cava, vena portæ and emulgent veins may be much enhanced by violent jolting, tight lacing, repletion, and similar causes. Whenever there existed a continued pressure upon the vena cava, or obstructions in the intra-hepatic ramifications of the vena portæ, and the more so when both were concerned, the initial symptom of meteorism appeared, and was attended with a network of subcutaneous veins coursing over the surface of the abdomen. In a few cases, the blood in the superficial veins of the lower limbs was observed to move in an uninterrupted current, dependent, as it were, upon the respiratory movements. In others, the symptoms indicated phlebitis of the right epigastric branches and trunk of the vena portæ. It will readily be understood why the torpor of the liver and spleen, so often present, should aid in throwing an overplus of blood upon the intestines and kidneys.

When the return of the venous current is more or less permanently impeded or arrested, not only a stasis in the remote radicles takes place, but certain vital actions, such as nutrition and secretion, are impaired below the point of obstruction. Should varices develop, the blood often deposits strings of coagulum within them; and when this is the case, the vessels become incapable of being easily emptied by pressure, and are firm to the touch. The deposition does not in general fill the calibre of the vessel, but still farther retards the flow of blood, and causes dilatation to increase. Eventually, the coats of the vein and the adjoining areolar tissue become agglutinated, and the varix may at length burst from pressure and ulceration. The most suddenly alarming hæmorrhages, with, perhaps, the exception of profuse hæmoptysis, were those which proceeded from the ruptures of such varicose enlargements situated at the greater or less extremity of the stomach or the flexure of the colon.

The usual mode of effusion, in the vast majority of cases, was when the overloaded capillaries allowed their contents

to escape as by exhalation, through the lax and infiltrated tissues of the parts involved. Thus, when a purpuric degeneration was fully established, an interstitial hæmorrhage sometimes took place from several organs simultaneously, as from large tracts of the gastro-enteric and genito-urinary mucous membranes. These remarks are based upon clinical observations through a series of years, assisted by occasional glimpses furnished by a few autopsies.

Persons who labor under the chronic effects of the toxic element (for the term chronic malarial poisoning, adopted by Loomis and others, seems ill chosen), drag on a languishing existence, and are the prey of malaise, various dyspeptic symptoms and feverishness; but as these do not always debar them from all occupation, they are often neglectful of treatment. With diminished powers of resistance, they are thus liable, from such occasional causes as internal irritants, unusual exposure and exercise, to dangerous attacks of paroxysmal fevers, attended with congestion or hæmorrhage. The paroxysm is generally preceded by sensations of sinking, nausea, cooling of the surface, seldom rigors. The pulse is small, thread-like or thrilling, with imperfect attempts at reaction, manifested in febrile movements of an adynamic type, with a great proclivity to collapse. The gums are often slightly swollen, and of a dark red hue, and a few purpuric spots or ecchymoses may be noticed on the lower extremities. These are accompanied with rheumatic pains. The hæmorrhages may, at times, prove trivial and easy to be arrested, but in some cases, even when they are interstitial, may be sudden, incessant and rapidly exhaustive, ending in syncope, convulsions, or both. In the worst cases, the blood will be found of extreme fluidity, and much defibrinated, while the blood vessels are patulous, from which conditions arises much of the difficulty to control the emission.

The next branch to receive attention will be the *varieties of hæmorrhages met with in malarial cachexia*, and such modifications of treatment as these may require.

Epistaxis is the form most frequently observed among younger cachectic subjects, although it is not confined to

them. It is often traced to exposure to cold spells of weather; and, like the dark red spots seen on the cheeks in connection with it, excites apprehension of congestion or inflammation—perhaps as yet latent—of the organs of respiration. The hæmorrhage is rarely the result of active determination in these cases, but seems dependent upon an over-charge of the right cavities of the heart, and a want of tonicity in the vessels of the Schneiderian membrane. When the hæmorrhage was entirely confined to the nostrils, a moderate loss of blood proved of apparent advantage. But there were cases when its unimpeded profusion led to very serious consequences. Although no deaths occurred, several neglected cases were seen almost in *articulo mortis*.

With the exception of the usual local means, which often failed till compression and vesication were used, the best internal treatment consisted in the judicious exhibition of tincture of opium with tartarized antimony, which always relieved the patient, even in the worst cases, without increasing debility. So soon as this was laid aside, quinia, tincture of chloride of iron, and occasionally opium, were administered.

Hæmoptysis may forestall epistaxis, and present many troublesome features, although no fatal case can be recollected when this was the sole complication. The same favorable termination could not be expected where a confirmed purpuric dyscrasia existed, with hæmorrhages from other sources. The blood oftener proceeded from the right than the left lung. In every case, palpation and percussion detected notable enlargement of the liver; hence, to relieve this organ, which was also functionally deranged, became of paramount importance, and whenever this was effected, comparative relief ensued. At the same time, tartrate of antimony and laudanum, in the mode recommended by Graves, of Dublin, proved of signal service, both to the adynamic fever accompanying this form and the pectoral lesion. It was best to give each dose largely diluted with water. For the rest, the treatment was deemed imperfect till quinine and iron were introduced.

In a small proportion of cases attended with hepatic disease and an approach to, if not actual, softening of the spleen,

the pabulum of the blood was much broken, and there appeared the usual concomitants of *purpura hæmorrhagica*, as petechiæ, ecchymoses and vibices. Blood began to issue from the spongy gums, the sockets of loosened teeth, and the buccal surface generally; and, in a few instances, in such profusion as to baffle attempts to arrest or even control it. Enteric hæmorrhage followed in the worst cases, and proved speedily fatal. The blood was quite dark and very fluid; it coagulated imperfectly in small, detached masses, which became somewhat more florid when long exposed to the air. It issued from the mucous membrane by exhalation, or as from a seive; and at times, as the collected stream flowed from the mouth, it had a striated appearance, probably from being intermingled with the salivary fluids. The best treatment proved to be wine, nourishing diet, the exhibition of a solution of tincture muriate of iron, sulphate of quinia and laudanum, repeated in proper doses at short intervals; twenty drops of spirits of turpentine three times, or oftener, daily; mild laxatives, chiefly of the warm, resinous class, and demulcents.

By far the most prevalent form of hæmorrhage in chronic malarial cachexia is the *enteric*, taken in its widest sense. It is, also, when excessive, by far the most fatal—the number of deaths from this form alone being greater than from all others combined. Nevertheless, recovery does occasionally take place under very untoward circumstances. At times, the effusion of blood results in simple *hæmatemesis*; at others, it is purely *anal*. When the portal vein is chiefly concerned, there is apt to be an oppressive pain at a point midway between the ensiform cartilage and the umbilicus, increased by pressure; and while the biliary secretion is checked, occasional bloody stools are evacuated. Such sanguineous discharges seemed at times critical of visceral engorgements, as when an enormous spleen, or a bulging abdomen suddenly diminished with their occurrence; the various secretions improved in character, while a healthier complexion re-appeared, and all febriculæ vanished. These happier results were not to be counted on, and just apprehension existed in most cases. It was, however, where cirrhosis was diagnosed that most

danger was usually indicated. Here the gorged veins of the portal system were apt to discharge enormous quantities of dark, grumous blood, both upwards and downwards. The splenic tumor, when large and prominent, soon became shrunken and flabby; and if a single autopsy could be cited as a rule, in similar cases, the hæmorrhage proceeded from varices in connection with the gastric vein and congestions situated near the cardiac orifice of the stomach. When, in the exceptional cases, recovery took place, it was observed that the pre-existing anæmia was not apparently enhanced by the fluid lost; and hence there were reasons to suspect that the hæmorrhage had consisted in great part of blood, that had been partially devitalized, or that had gradually accumulated in some receptacle, as the spleen or plexus of congested vessels; and, therefore, might be said in a qualified sense to have been extravasated without the systemic circulation. In some instances, the hæmorrhage, attended with much borborygmi, proceeded from the cæcum or sigmoid flexure of the colon; for it passed entirely downward, and could, by palpation, be so limited. The blood usually possessed a decided venous aspect. That which was evacuated by stool frequently yielded evidence of the action of the intestinal secretions, being more or less mixed with matters—fæcal or otherwise. In some cases, the discharge was horridly offensive, and resembled, in many respects, the black vomit, but differed from this, in that a sheet of white paper dipped in it would show the red hue of blood. These were passed off at intervals of a few hours, were profuse and without pain, but always accompanied with nausea and a tendency to collapse. The melænic character of the matter vomited was marked, and several times the urine was affected in like manner.

As the mineral astringents, with only a slight exception in favor of ferrous chloride and alumina sulphate, proved of no benefit, the main reliance was on opium, administered according to indication, and on spirits of turpentine as soon as this could be retained by the stomach. The spirits of turpentine, given in doses varying from twenty to sixty minims, in connection with laudanum, had good effect in my hands, and, as

a styptic, had no superior. Quinia was absolutely of no use during the continuance of the sanguineous emissions, but afterwards proved serviceable in combination with tincture of chloride of iron. With the exception of a laxative dose—usually of calomel—to obviate visceral obstruction, and nitrate of silver to relieve nausea and revulsives—these constituted the main treatment.

CASE I.—W. J., æt. 49, had been subject to periodical fever from early life, which had induced a chronic cachexia, with its attendant evils—mental and physical debility, enlargement of the abdominal viscera, a dull, sallow and dingy hue of the skin. Of late years, his repeated attacks of fever were attended with much nausea and vomiting, and for the last twelve months hæmatemesis had appeared to an alarming extent. I was called to attend him at night in the last attack, and found him vomiting large quantities of dark, grumous blood, at intervals of ten or fifteen minutes. Countenance anxious; pulse rapid but small; febrile heat of surface; tongue furred; bowels torpid; urine sparse and high colored; spleen shrunken but easily felt. After quieting the stomach with opiates, I gave him one ounce of spirits of turpentine, which, after having been retained for about two hours, was followed by nausea and vomiting of a small quantity of very dark, semi-coagulated blood. Opiates were continued. In due time, the bowels were freely and easily moved. The first stool had some of the appearance of blood, but the nausea and hæmorrhage had entirely ceased. Under a corroborating treatment, the visceral infarctions disappeared; his complexion improved, and for several years afterwards he enjoyed ordinary health.

CASE II.—Mrs. B., æt. 56, has suffered for many years under chronic malarial cachexia and repeated attacks of intermittent fever. She was, besides, afflicted with umbilical hernia and procidentia uteri, and had had a few fits of chololithus meatus. Her skin had acquired a brownish yellow hue, and was usually soft, waxy and dry. Her pulse became small and thrilling; hepatic and splenic tumefactions co-existed with some degree of ascites. Very recently, her bowels had been teased with some small bloody discharges, but these had ceased spontaneously, and had been followed by an intermittent fever of rather an adynamic type, but with no decided chill.

February 22.—The treatment was begun with a mild mercurial laxative, followed by ten grains of quinia twice daily.

Under this course, the abdominal tumefaction diminished much in size, although the bowels had only responded by a few dark stools. The urine continued red and sparse; no improvement of the febrile symptoms and pulse occurred.

March 1.—A laxative was repeated and also quinia in grain doses at short intervals. No alvine discharges took place till the succeeding night, when, with considerable nausea and borborygmi, she suddenly passed, both upwards and downwards, large quantities of dark, grumous blood, apparently from veins connected with the spleen, for that viscus was found on the next day, unmistakably shrunk and flabby, compared with its very recent condition. Very little fecal matter appeared in the stools. The pulse, at this visit, was somewhat stronger, but much accelerated, and her general prostration, to say the least, was not increased. Acetate of lead, with tincture of opium, was administered, but proved of little value, as the hæmorrhage recurred unabated from time to time. One drachm of spirits of turpentine with laudanum was then resorted to, every three or four hours, to be repeated *instantly* when thrown up; and this was followed by a gradual, but marked amendment. The discharges diminished both in quantity and frequency, while the strength proportionally increased and the pulse approached the normal rate. On the morning of the 4th of March, after a quiet night, she vomited a little mucosity and passed a slightly bloody stool. Continued treatment.

March 5.—No hæmorrhage or stool since the last named date. Borborygmi had entirely ceased; the abdomen was reduced to about one-third of its former size; very little fluctuation could be felt; pulse firm and regular. Prescribed opiates, tonics and a corroborating regimen.

March 6.—No alvine evacuation; urine clearer and more abundant; pulse and general strength improved; appetite good. Continued treatment.

March 8.—On this day, with scarcely a warning, large and sudden discharges of dark, grumous blood with semi-clotted masses recurred both by vomit and stool, and she speedily sank.

Some cases of *uterine hæmorrhage* have been recognized in this cachexia. The periodical character of the fever, the nature of the discharge and the difficulty experienced in arresting it left no doubt of its connection. Very recently, a peculiar case came under my attendance, in which quinine and iron proved of great service. Opiates were always necessary—

often in full doses. But these cases have not been sufficiently studied to receive more than a passing notice.

The last form to be considered is *hæmaturia*, which has recently attracted so much attention in connection with malarial poisoning, and, indeed, to such a degree as to be regarded, by some excellent observers, as a new morbid manifestation of the toxic element. But a candid review of the records of medicine will show that though our predecessors were not ignorant of this complication, none seemed disposed to give it pathological prominence in the series of events in which it was found, or to seek a place in nosology for a new febrile disease. Its appearance in dyscrasia was, nevertheless, always deemed a prognostic of danger, and, in zymotic diseases, justly looked upon as an alarming symptom. It was one of the recognized effects of the Walcheren fever which were visible in England, for several years after the return of the ill-fated expedition to Holland. Dr. Elliotson cites an interesting case of intermittent hæmaturia in a patient at St. Thomas' Hospital, who had formerly had the fever; and in this, as in several other instances, the discharge of blood was coincident with the cold fit. It can scarcely be denied that most accomplished physicians of the South in the past generation were as well acquainted with this hæmorrhage in malarial as in yellow fever. But "in medicine, as in dress, nothing is so new as that which is forgot."

A peculiar dyscrasia must be the necessary antecedent of the hæmaturia in question; for it is never witnessed in a new-comer undergoing a first attack of malarial fever, at least in the temperate zone. Again, it is quite conceivable that, should those grave alterations of the blood, which constitute chronic malarial cachexia, be suddenly brought about—necræmia—not hæmaturia—would be the probable result. On the contrary, experience in this latitude demonstrates that while malaria acts with different degrees of intensity, however rapid its effects on the circulating fluids may be in their inception, these, if not arrested, go on, by continuous metamorphoses, to establish a condition in which alone this complication of hæmaturia is possible. Nor is it surprising under these circumstances—when the size of the emulgent ar-

tery, compared with that of the descending aorta is taken into consideration, together with the morbid fluidity of the blood, and such pressure as may be exerted on the vena cava by the superincumbent organs, intensified by febrile stages—that determination should take place to the kidneys. Congestion of the Malpighian bodies from obstruction to the return of blood from the capillary plexus of the renal veins may at first cause effusion of the liquor sanguinis into the tubes and consequent albuminous urine, but finally may lead to the escape of all the constituents of the blood.

The patients whom I have attended with hæmaturia in malarial cachexia were never seen in sufficient number in any one year or place to merit the designation of an endemic; but this may occur in future, as every physician of long standing must have witnessed a marked tendency to hæmorrhages at some period of his career. In the daily routine of a country practitioner, and of one who aimed not at literary distinction, minute notes were apt to be neglected; nor were nice tests possible; whence this paper must be imperfect in detail. Nevertheless, a faithful summary of facts is not the less useful when the steps to arrive at them are not given. The general results of investigations made exclusively for private use, in regard to this subject, were as follows: The symptoms usually preceding were: urine sparse, almost always high colored and of greater specific gravity; in two or three cases the urine was so thick as to be discharged with difficulty; sometimes, long enough to attract attention, what appeared to be a suppression, preceded the emission of bloody urine; albumen could be easily detected in the reduced urine; there were pains, or at least much uneasiness in the lumbar regions. Afterwards, the urinary discharges became commingled with red or brown, at times nearly black, sanguineous matter. In a few instances this had the appearance of port wine, and contained what appeared to be casts and blood disks. The specific gravity usually exceeded 1025. On cooling, the urine deposited a dark, muddy sediment. Nitric acid and heat, when employed, yielded a dark coagulum. Chloride of sodium rendered the sediment bright red.

From casual notes jotted down in the course of practice, I glean the following abbreviations of six cases, which are here given for what they are worth:

Malarial Cachexia—Fever Pseudo-Remittent. CASE 1.—Skin chappy, furfuraceous, icteritious, tongue brown, pulse shattered and thrilling—melanic vomit and urine.

CASE 2.—Urine at first sparse and thick—hæmaturia.

CASE 3.—Pain and enlargement of spleen—hæmaturia.

CASE 4.—Pain in left hypochondrium and enlargement of spleen—hæmoptysis and hæmaturia.

CASE 5.—Enlarged, painful spleen—hæmoptysis and hæmaturia.

CASE 6.—Urine sparse and high colored, followed by—hæmaturia.

The severe cases always presented a peculiar discoloration of the skin, which may be described as a dingy sallowness. There were to be noticed anxiety of countenance, sunken eyes, pinched features, feebleness of pulse, and a remarkable tendency to collapse. Other symptoms, such as nausea and vomiting, of usually dark green, sometimes dark brown, fluid would remind one of that variety of the yellow fever termed congestive or hæmorrhagic, and the more so when the trunk and face assumed a yellow or new mahogany hue, and the extremities were splotted with purple spots. The bowels were either costive or yielded dark offensive discharges; torpor of the biliary secretion prevailed; the respiration was sighing and oppressed; hæmaturia was preceded by an almost total suppression of the proper function of the kidneys; lumbar pains and uneasiness about the neck of the bladder also were complained of.

As changes in the urine are often due to those of the blood, so on the other hand, through morbid derangements of the urinary secretion, the blood may become contaminated with principles which should have been eliminated from the system—and this reciprocal action may occasionally be observed in the course of the same disease. Thus, at the bedside, when the secerning action of the kidneys is at fault, all the excretions may exhale a urinous odor, from which fact alone might be inferred the presence of urea in the blood. In some of these cases, the nauseous taste of urine, as well as the odor, are present in the mouth.

Sometimes within the tropics and the countries bordering on them, in many of the worst cases of fever, an exudation of blood takes place from the tongue, gums, nose and anus; and whenever leeches are applied, the tendency to hæmorrhage is so great as to render it almost impossible to stop the effusion. Every spark of hope was extinguished when necræmia was at hand. In truth, the danger was not simply due to the interstitial hæmorrhage considered in itself, but to the complete depravation of the sanguineous mass, and the shock, so to speak, to the nervous apparatus; and was to be traced in them, as in the hæmaturia under consideration, directly to passive congestions and imperfect reaction, and more remotely, perhaps, to organic changes, uræmia and the formation of heart-clot. It is presumed in this latitude the effect of the toxic element is slower in its manifestation, and vitality is not so speedily overwhelmed, thus affording opportunities to study the cases and apply remedies. The indications of treatment become thus more distinctly settled on the mind.

In conclusion of this branch, it is pertinent to say, that where hæmaturia has existed, even accompanied with very alarming symptoms, not more than three deaths have come under my observation.

CASE III.—Miss M. C., æt. 19, had experienced many attacks of paroxysmal fever from infancy which had left her health much impaired. For two or three months previous to the 29th of October, she had regular paroxysms of chill and fever, for which she had taken laxatives and quinine, but with no permanent benefit, though during much of the time she was not confined to the bed. She had, in the meantime, become so thoroughly cachectic, that her former comeliness had disappeared. Her skin was dry, sallow and dusky; features somewhat pinched and despondent; abdomen much enlarged; respiration oppressed to the degree that she was not able to tighten her clothes; pulse compressible and thrilling, 98; anorexia; nausea; bowels moved occasionally; discharges dark and slimy. The urine, which had been very deep red and pungent, and rather sparse, had become this evening unmistakably bloody, resembling the menstrual flux, and was now passed often and rather copiously. The exac-

eruations came on in the afternoon, with neuralgic pains very severe at times about the loins.

R. Calomel. gr. xx.

Gum opii..... gr. ij. M. For one dose.

To be followed by—

R. Hydrochlor. ammoniæ..... ℥j.

Tinct. opii..... ℥j.

Aquæ fontanæ..... ℥viii.

M. Sig.: A tablespoonful to be taken every two hours.

Oct. 30.—In the morning, after a few copious bilious stools, the hæmaturia entirely ceased. A deep jaundice now pervaded the surface, and even the sputa was yellow. She was also slightly salivated; skin moist; abdominal parietes soft and relaxed; all renal troubles had ceased; the urine was now only of a deep orange hue, and moderate in quantity; pulse much improved in volume and rhythm, 80; no pains. Continue the ammoniacal solution with the addition of one grain of sulphate of cinchonidia to each dose.

Oct. 31.—Improved in every particular; had missed her fever, and rested comfortably through the night. Skin soft and moist; jaundice much less; urine nearly normal in appearance; so also were the alvine discharges which were obtained without medicinal aid. Gave hydrochlorate of ammonia, grains ij, every two hours, and alcoholic drinks in moderate quantities. The after treatment consisted of tonics, and chiefly ferruginous preparations till perfect recovery.

CASE IV.—C. B., a prosperous farmer, married, æt. about 40 years, subject to serious cardiac troubles from early life. In September, 1874, he had an attack of remittent fever, for which mercurials and large doses of sulphate of quinia were prescribed. On convalescence, a relapse took place, with aggravated symptoms, for which laxatives, alteratives and quinine were given—the latter in free doses to force an apyrexia.

On the 27th of October, I was called in consultation with my esteemed friend, Dr. H. T. Hunter, the attending physician, with whose permission I took the following notes: From the time of relapse, a fever of a pseudo-remittent type, with regular afternoon and night exacerbations, had now lasted for about three weeks. The patient presented all the appearance of an advanced grade of malarial cachexia, with a deep greenish jaundice that pervaded all the tissues; skin dry; countenance anxious; great emaciation; tongue expanded and peculiarly smooth. At 11 o'clock A. M., the

pulse was 78, compressible, thrilling and wavelike; decubitus on the back; respiration embarrassed and sighing. The cardiac region was prominent, and he complained of a distressing sensation about the ensiform cartilage. On auscultation, a distinct friction murmur was heard within the pericardium, with signs of effusion; but from the peculiar position of the patient, and his dread of disturbance, a more extensive examination of the heart and organs of respiration was impracticable. There was, however, great irregularity in the contractions of the heart. A valvular murmur was audible on either side of the organ, together with a bellows sound which proceeded from the interspace between the second and third ribs, close to the sternum. This latter, which was apparently two-fold, was perceived a short distance from the bed. The walls of the abdomen being much attenuated and flaccid, the liver, which could be distinctly palpated, was found tumefied, while the spleen was moderately enlarged. He complained of no gastric distress, although the bowels were rather loose. His appetite was somewhat kept up by tonics.

His chief complaint was of much uneasy feelings in the lumbar region. The urine was thick and bloody, of a dark venous red color, and contained some small flocculi. He was tormented with a frequent desire to micturate, and the urine issued in small quantities at a time. The urine had gradually acquired its present aspect during the course of a week. Specimens of the urine which were subjected to nitric acid and heat, yielded a brown coagulum, and its specific gravity was found greater than usual. He had had some ascites, but now the flaccid abdominal parietes gave no evidence of effused fluid beneath them. Edema existed in the right lower extremity, and extended almost to the groin; but in the left limb, the swelling involved only the ankle. Sleep was much disturbed, and there appeared at times symptoms of approaching uræmic poisoning, although when fully aroused his mind seemed intact. With a prognosis so very unfavorable, it was deemed best to follow the most obvious indications.

R. Calomel.....gr. iij.

Gum opium.....gr. j. M. Take three times daily.

R. Infusionis gentianæ.....ʒviiij.

Hydrochlorid. ammoniæ.....ʒj.

M. S.: One tablespoonful every two hours, together with mild revulsives to the chest.

Oct. 31.—On the second consultation-visit at 11 A. M., jaundice less pronounced; febrile paroxysms subdued; skin pleasant; pulse full, firm and regular, about 79; tongue clean

and moist; no ptyalism; had an alvine discharge within 24 hours, which was nearly natural; had slept well and felt much refreshed; strength somewhat improved; action of the heart firm and equable; valvular murmurs and blowing sounds much less in intensity, and were heard mostly over the right auricle. No friction murmur could be distinguished. There was now no marked tumefaction of the cardiac or hepatic region, although the spleen had very perceptibly enlarged. In the right leg, the anasarca extended only to the knee, and the limb was affected with a tingling sensation. The left leg was more tumid, but the swelling did not reach the knee.

Since the last date, he passed more urine than he had for the previous three weeks. Its bloody appearance had disappeared by degrees, and since yesterday, it had remained simply of a deep orange hue, limpid, but still of a greater specific gravity than usual. Prescribed opium, and continued the infusion as before.

This case continued afterwards to amend in several particulars, till the morning of the 3d of November, when the patient sank.

Claiming some of the freedom allowed to clinics, a few *running commentaries on some remedies* may be pertinent.

While it is impossible to estimate, at its true value, the boon conferred upon the human family by the discovery of *quinia*, there are reasons to suspect that, like venesection, catharsis and other therapeutic agents in vogue at various epochs, it has often been employed without a due regard to proper limitations. Its lavish and excessive use in all diseases recognized to be of malarious origin, and under all contingencies, cannot always be judicious. Seldom are doses above twenty grains necessary except in pernicious fever and Asiatic cholera, and then solely with a view to secure the speedy absorption of enough of the remedy to impress the system. Meantime, its toxicological effects should be avoided with professional tact, as these may enhance the danger. In former years, doses of one or two grains, frequently repeated, with the addition of opium when indicated, succeeded very generally as well in overcoming collapse. Briquet (*Traité Therapeutique du Quinquina et de ses Preparations*) concludes: That the administration of the salts of quinia in doses sufficient to induce a sedative impression upon the circulation, produces

in the economy so serious a perturbation, that the risk ought not to be run, except when the disease is serious, either from its duration, its gravity, or the accidents and danger to which it may expose the patient.

That quinia is a specific in malarious diseases, is a phrase calculated to conceal our ignorance of the mode of cure. Even its power as a prophylactic, when fairly tested, has proved unsatisfactory and fallen below expectation. Often, when exhibited in large doses, without due preparation, in anticipation of a paroxysm, or for weeks and months in divided doses, as a preventive, it has failed to avert an attack. Indeed, as a prophylactic, carbolic acid given in grain doses, at intervals of three to six hours, has, in my hands, yielded comparatively far happier results, even in cases where unmistakable prodromes of malarial fever were actually present. In experiments instituted during the past seven years, on my own person and others, feelings of lassitude, malaise, cutaneous torpors, disturbed sleep, furred tongue, nauseous taste and anorexia, often gave way under this treatment within 24 hours; and a pulse hitherto jerking and irritable, became calm and of the natural rhythm, while a soothingly pleasant sensation pervaded the system. No fever manifested itself in any of the cases; on the contrary, the person felt refreshed and buoyant.

No other agent which I have employed has ever superseded *carbolic acid* as an *apparent* disinfector of the malarious taint within the system; and this, after anxious thought on the subject for years, is to my mind the first glimmer of light that may lead to the discovery of means to act directly on the poison of fever.

To return from this digression, quinia, besides not being antiloimic, is not by far the best tonic, nor does it directly promote hæmatisis, nor is it a good hæmostatic.

These negative qualities, however, do not degrade quinia from its true cardinal position. While we know little that is positive of its seat and mode of action, its most obvious and all-important use is to overcome periodical congestions—the ultimate effect of malarious poisoning of the blood. Thus, when moderate doses are given, after invigorating the stom-

ach, its first impression seems to be directed to the nerves of organic life, as may be learned at the bedside, by changes in the capillary circulation; its next effect is evidently on the cerebro-spinal nerves. The best designation to which it is pre-eminently entitled is that of an anti-periodic; for its main property is to overcome periodical congestions, which it does best in proportion as they are the more recent; whence follows its unquestioned value in all paroxysmal fevers. On the other hand, both experience and observation have taught that in chronic malarial cachexia it takes a secondary position to several other remedial agents; for it evidently possesses a limited, and, at times, injurious power over passive, or the more so over hypostatic congestion of long existence, especially when given *ad saturandum* or to produce a greater sedation. So, when prescribed in quite large doses, as was formerly recommended, to act upon an enlarged spleen, this viscus often contracted rapidly within certain limits, when a further reduction ceased, and on several occasions during this reduction, enteric hæmorrhage was precipitated. The hæmorrhage in these cases, as that under a similar cachectic condition which followed so frequently the exhibition of Epsom salts in domestic practice, left no room to doubt the exciting cause. That excellent authority, Dr. Geo. B. Wood, states that when the individual dose of quinia is large, there may be flushing of the face, headache, and sometimes epistaxis. Occasionally, also, doses of quinia, of twenty grains or more, have been followed by hæmaturia and ardor urinæ, both of which abated and ceased on withholding the remedy. In one case, the hæmaturia was renewed at each exhibition of twenty grains of quinia at an interval of about two days. In corroboration of the same facts, other authorities might be cited, and we might also refer to the detection of the alkaloid in the urine.

From these observations might be inferred that to force an apyrexia, as the phrase is, by large doses of quinia, when confirmed malarial cachexia is diagnosed, can never be a true indication; but to remove such congestions of recent origin as may accompany it, is always within the province of smaller doses, and this can never be dispensed with when the febrile

stages are distinct and the paroxysmal character pronounced. Nevertheless, calisaya is often preferable on various accounts.

In many instances, we have other agents upon which reliance can be placed. First among them is *ammonium chloride*, from which I have derived much benefit. Dr. Ogier Ward (*London Lancet*) examined and compared the therapeutic effects of the various salts of ammonia, and found, whether applied externally or taken inwardly, they possessed, in common, the property of dissolving the proteine elements of the blood, whether in the vessels or effused into the tissues. Since this announcement, the fact has been amply verified in my practice, and thus I obtained, in passive congestions and infarctions of long duration, an agent more potent for good than any of the cinchona alkaloids employed alone. The hydrochlorate of ammonia, to which I was early directed by the perusal of a work of Richter, has received my unqualified preference as the most stable and useful of the salts having ammonia for their base. It unites in itself properties rarely to be met in other articles of the materia medica. Besides its resolvent and tonic effect, it tends to restore the powers and functions of the economy to their healthy standard. I know no better means to combat uræmia than this, in combination with opium; and, for many reasons, it is well suited to cases complicated with hæmaturia.

All treatment of this cachexia must be imperfect without a judicious use of *opium*—both to relieve irritation and as an alterative of no mean power. When the indications to relieve visceral obstruction are faithfully observed as also to restore the secretions, then *chalybeates* become of great service.

This paper was written in fulfillment of a promise exacted by several partial friends, and not with any personal motive to be gratified.

The London Lancet (page 427) declines to notice a medical association “while the name of a female member is retained on the list.”

ART. III.—**Rhizopods (so-called) as a Cause of Disease—Treatment—Second Report.** By EPHRAIM CUTTER, M. D., Boston.

In the November (1878) number of this Journal I reported the testimony that I had on this subject. Since that time, the matter has assumed a grave aspect. I have had one case to die; another case, with asthmatic symptoms, is expected to die; and have heard of several other cases in the hands of my contemporaries that I have every reason to believe were similar cases that were also fatal. I do not, then, write in the interest of pure science alone, but for the sake of suffering humanity, of which we ourselves are a part, and with which we suffer or enjoy.

As a clinical observer, I find that thousands, if not millions, of our people are or have been suffering with contagious "colds." Some get well of themselves; others are severe cases; some die. I believe that the *asthmatos ciliaris* is the cause, and I think I have the right to submit the evidence on which I base my belief, with the hope that the matter will receive that study which, it seems to me, it deserves. It is unfortunate that we have no French Academy in this country to which it could be submitted, and I may say here that the Johns Hopkins' Trustees could make no better use of their trust than to establish such a tribunal. As it is, I can only call respectfully for a consideration of the following testimonies, not included in my former report, above referred to.

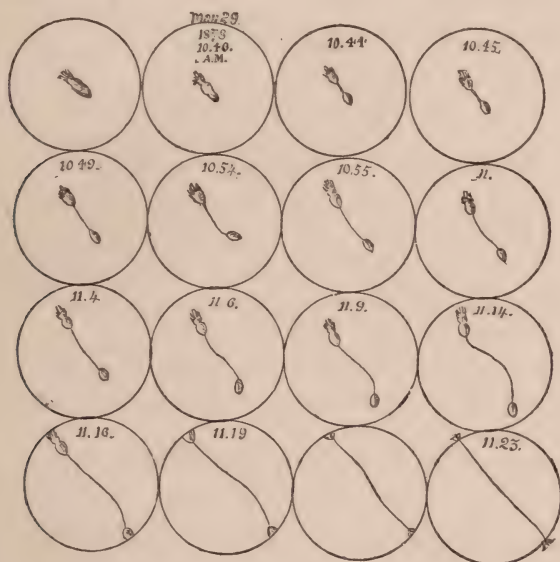
1. Dr. G. B. Harriman, my associate in micrology, has exposed slides, covered with glycerin, in the air of infected districts, and tells me that he has caught forms floating in the air identical with the *asthmatos*.

2. Dr. J. H. Salisbury writes, January 14th, 1879:—"Frequently I have found the *asthmatos ciliaris* in the mucous secretion of the *eyelids* and nose before the disease has yet extended to the throat. In fact, the parasites almost always attack the membranes of the eyes and nose first—unless it be in persons who habitually breathe with the mouth open."

3. (Condensed from the *Boston Journal of Chemistry*, November 1878): W. Martin Living, of Arlington street, Cambridge, Mass., said his one-and-a-half year old child had the croup or lung fever. I found neither, but there was a

severe harrassing cough, copious discharges from the eyes and nose, flushed face, fever systemic, breathing free, pulse regular. The nasal excretion contained an abundance of the living, moving, rocking and still forms of the so called *asth-matos ciliaris*.

The passive inhalation of the nascent chloride of ammonium (by means of an apparatus of the writer, made by Codman & Shurtleff of Boston) was given to the child. Some of the excretion was placed on the stage of a Tolles' stand with a one-sixteenth inch objective eye-piece for a condenser, and exhibited the phases shown in the cut. Four persons saw the genesis.



May 29th, 1878, 10.40 A. M. It gradually separated itself, as in the cut, until at 11.23 A. M., it got out of the field. The gubernaculum then parted in the middle. That part connected with the parent was drawn into its body, and that connected with the new individual was drawn into it. After these changes occurred, Prof. Reinsch came in. He said it was new to him, and desired to study the process further on new specimens from the child. It was seen at 8 P. M. We studied the excretion for one hour and found only *one* specimen. It was alive and had forty feet. The child in the meantime had been relieved and was playing about the room, though it was late. It was cured. Next day further exami-

nation revealed only one specimen. It was dead. The search was strict and very careful and disappointing.

The clinical lesson I derived from this was that the nascent chloride had killed the parasites.

4. *September 24th, 1878, 1.05 P. M.*, a specimen from my own nasal excretion had its feet downwards on the lower surface of its oval body. From the nearest end, a gubernaculum extended straight, about twice the length of the body, with a young individual at the end; at 1.11 P. M., it turned over, so that the feet were upwards; at 1.14 P. M., gubernaculum drawn up into two curves like the letter W; at 1.15 P. M., into one large U curve; at 1.20 P. M., gubernaculum straight and inclined at an angle of 135 degrees to the axis of the body; at 1.23 P. M., while the straight gubernaculum still kept the angle, the feet began to disappear. I thought them drawing in; at 1.24 P. M., gubernaculum, the same; feet now on the under side once more; at 1.25 P. M., gubernaculum now forms an angle of 45 degrees with the body, which moves towards the gubernaculum; at 1.26 P. M., new individual almost touched the body; gubernaculum curled like a crozier; at 1.30 P. M., body vertical; gubernaculum elevated in a large curve; at 1.35 P. M., gubernaculum thrown backwards and more elevated. A round nucleolar body now formed within.

Remarks.—These seem to me more than amœboid movements. They are protoplasmic in the sense that those of the common amœba are.

5th. *December 22d, 1878, Mrs. J. P. R., of Woburn, Mass.*, has been sick four weeks; well before then. She took cold in common with the rest of her family and had what was called pneumonitis. There was severe cough, bloody sputa, dyspnoea, great back-ache and trembling. About a fortnight ago, coughed with choking and vomiting.

Present condition: Coughing bloody sputa so as to cover the bottom of a common crockery wash bowl daily, with thick, adhesive, varnished, bloody—not rusty—sputa; vomits; anorexia; weak; gets little or no sleep from constant coughing; not much fever; respiration not much quickened. *Physical signs*—no dullness on percussion over lungs; respiration clear save over the upper third of right back.

28th. In bed; coughing severely; inhaled sulphur fumes once without effect. Sputa glairy, adhesive, viscid, varnished and streaked with red blood—not rusty; no fever, no pus of much moment. Examined sputa and found two speci-

mens of the asthmatos with cilia actively moving and studding the whole periphery of the animals. Ordered burning sulphur and hot water inhalations.

29th. Better; inhaled the fumes of sulphur thoroughly; slept six hours—longest sleep for six weeks; asthmatic; *no bloody sputa* since morning; ate well; two specimens dead.

31st. Has raised much less and coughed less, but is weak; somewhat better but asthmatic. Sulphur continued; use larger beer and turpentine.

January 2d, 1879, better; not much cough; hardly any blood in the sputa. Sleeps well. Has had her breathing relieved. Dr. A. P. Woodman, of Woburn, kindly examined her and could not find any disease in the lungs.

Remarks.—If there had been pneumonitis for all this time, one would have expected to find physical signs of it. This is a remarkable clinical feature. I left her in charge of Dr. Woodman.

January 6th. On the 6th, she took cold; fainted; couldn't breathe; turned lead color, and has been worse ever since. Dr. Woodman says there was dullness on percussion over the lower right lobe of the lung of the back. He regarded her situation as critical.

Present condition: In bed; appetite poor; no dullness on percussion; fever comes on at night, and lasts all night, when she blows and wheezes. Sputa copious, white, stringy, bloody, &c. She had given up her sulphur inhalations.

11th. Lungs filled with coarse and fine sibilant râles of an asthmatic type. Appetite good. Gave her a hand atomizer with which to use the salicylate of soda, saturated solution.

14th. She likes the soda, as also her bath of muriatic acid; eats well; râles less in the chest; sputa now blackish.

17th. Worse; bilious; appetite bad; asthmatic symptoms increased; snow storm in progress; cough troublesome.

19th. In bed; uses a 5 per cent. solution of carbolic acid in the atomizer, and prefers it to the other inhalants. Coughs and raises some, but little, blood. She has vomited a body that was thought to be pulmonic, but microscopy revealed fibres of a red color and cross markings—evidently beef. Dullness on percussion at lower third of right lung. Mucous and sonorous râles all over the lungs.

Prognosis, unfavorable.

On no other theory can I explain the clinical history of this case than upon the asthmatos ciliaris idea.

6th. *January* 17th, 1879, Dr. Alonzo Towle, of Malden, states that a few weeks ago he saw a young man, aged 24 years, who had the severe form of the prevailing influenza. Under treatment, he grew better and moved to the town of Saugus to live. In this process, he contracted more cold, was very sick, and had all the rational signs of the case just narrated, but with a pulse of 140, collapse, orthopnea, asthmatic breathing, followed soon by death. There were no physical signs of lung lesion. For want of a better name, the complaint was called "lung fever."

Remarks. Dr. Salisbury speaks of this asthma in his original paper: he also says that it may be fatal.

7th. T. Gately's child, of Woburn, Mass., December 11th, 1878. Girl five years old. Sick for some time with cough and cold the same as the rest of the family. She was quiet, pale, listless, resistant of treatment, had diarrhoea, and her bowels were sore to the touch. Coughs severely, with copious expectoration of clear and white tenacious mucus. She has fever, but is able to be dressed and go about the room. No dullness on percussion of the chest, but there are some râles on auscultation. Her symptoms were entirely relieved by inhaling the fumes of sulphur and with the iodide of potassium. Afterwards she had more cold, attended by weakness and fever. There were some râles, but little cough. She used the nascent chloride with apparent success; still she would not eat nor take any medicine except the inhalant, which she could not avoid. Typhoid symptoms set in, followed with symptoms of effusion in the head. Wine and food rallied her from the coma for a few days, when unconsciousness was renewed and death occurred on January 4th, 1879.

8th. Shortly after last Christmas, a big man of 55 years was confined to bed with symptoms of lung fever; face red; cough constant, severe, and painful; copious, clear, viscid, glairy, nasal excretion. He feels sore all over. Pulse quickened; respiration normal, save while in the act of coughing. The sputa was examined under the microscope, and several oval forms, with motionless feet, were found, and some ciliated epithelium. The inhalation of the sulphur was proposed, but patient objected, as a few days before he melted some sulphur for work-purposes, and he was almost strangled by the fumes. The nascent chloride of ammonium was then tried, but it did no benefit. I then made his wife burn sulphur cautiously on a shovel, at some distance away from the patient. In a few minutes he expressed a feeling of relief

and ceased to cough violently. Indeed he had no violent coughing spell afterwards.

Meantime his daughter, a young lady of sixteen, began to have discharges from the eyes and nose, with sneezing and cough. A portion of the thin, glairy mucus from the nose was found to contain twenty to thirty of the forms that I have called rhizopods. They were soon killed by the sulphur fumes and the cold arrested at once. The course of the disease was cut short, and the patient was spared the pains of the father.

It seemed to me that these histories could not be explained by referring these forms to ciliated epithelium; yet if it is so, Dr. Salisbury is entitled to thanks for suggesting such a simple and efficacious cure for colds characterized by the shedding of ciliated epithelium.

8th. About last Christmas, Dr. Woodman's family had the epidemic cold. Plenty of the forms were found in the secretions of one of the children. These cases got well of themselves.

9th. In 1878, I took the rhizopod disease from Dr. Harriman, my associate in micrology. This is common. Dr. Salisbury says that he catches it every time that he studies it on his patients. Dr. Harriman's history is as follows: September 17th, 1878, he was coughing and phonating hoarsely. On the Sunday previous, he was taken with coughing, sneezing, catarrhal discharges of a clear, glairy, adhesive mucus. On Monday, he felt quite unwell. There was some elevation of the body heat, with cough—constant and severe. He felt sick all over; eyes running over; frontal sinuses aching. He was able to be up and about. To-day at 10 A. M. I examined the nasal discharges projected upon a piece of India-rubber cloth, and found at least twenty-five specimens, alive and dead. Six persons saw them in connection with me. Some of them were photographed at the Boston city hospital with the $\frac{1}{5}$ inch objective.

Sept. 21. For a few days past, I have had a slight running at the nose, with sneezing, heavy eyes, and a little general *malaise*. I found three specimens of the round forms.

Being under a promise to demonstrate the forms to Dr. Elsberg, I tried to have the disease badly, but I got well of myself. This may appear strange; but it is the history of all the zymoses—some get well of themselves. All I ask is, that critics may catch the disease every time they study it.

I feel sure, from my own experience, that such studies will convince them much better than my statements.

10th. *Aug. 22, 1878.* Mrs. J. G., of Woburn, Mass., had a severe cold for two days. She was coughing, sneezing, with nasal discharges of a thin, glairy, adhesive character, and scanty in amount.

Under the microscope I observed many forms in active swaying motions. Some were dead. I showed some of the latter to Dr. J. M. Harlow, of Woburn. August 23d, I found many more forms. She had suffered much from her cough, and felt sick all over, with pain in her limbs. The irritation was working down in her lungs, and she felt sore in the upper third front of the chest.

Dr. Harlow said that there was a good deal of the whooping cough in town among adults, and occurring a second time. In my opinion some of it must have been due to the rhizopod. Mrs. G. inhaled the fumes of sulphur with benefit.

Her daughter (a young lady) took the same cold and was speedily cured, or, in common language, "broke it up at once" with the fumes of sulphur.

11th. Mr. L. L. Whitney, of Woburn, was told by the subject of the 8th instance of this list how much he was relieved by the means he employed during his sickness. Of course it was natural for Mr. W. to use the same method when he became a subject of the contagious cold. The fumes of the sulphur cured him promptly, but killed his wife's house plants.

The fact that such an atmosphere could do this shows that it is an agent of power, and that its influence as a therapeutic is not to be despised—not that I would advise the indiscriminate use of this agent by the laity, but I have reason to believe that some of the community of which these persons were members successfully used it during the progress of the epidemic.

12th. About this time, I found Mrs. P. Kenney, of Woburn, suffering from a severe cold like the rest of her family. Its history corresponds to the cases that have been related. I examined carefully the copious nasal excretion for specimens, but without success.

On the epithelial cell theory, it is difficult to explain why they are not always found, as ciliated epithelium ought to be *always found*; however, it is not so. While on the asthmatos theory, it seems credible that they travel into the deeper

parts of the air passages, whence it would be difficult to dislodge them. Actual experience of the stinging, burning and acrid feeling beginning at the nostrils and shifting to the deeper seated parts; the finding of the so called asthmatos at first abundantly in the primary secretion and afterwards in that which comes from the deeper parts; having the abnormal feeling to abate with the inhalation of parasitocides; the finding of live specimens before, and dead ones after the inhalant—all these facts seem to coincide in the history of rhizopodal catarrh. So in this twelfth case; though I did not find the forms, still the rational signs were marked, and not finding was not absolute proof of absence. Because people fishing do not catch anything, it is not inferred that there are no fish, as sometimes they are seen.

I advised the family to inhale the sulphur. It was done immediately and followed by relief from the severity of the symptoms.

13th. Mrs. W., four months pregnant, suffered with bronchitis and nasal catarrh. The whole family had been sick with the contagious cold, combined with other diseases. After much thought, I put her household on the use of the sulphur fumes. Her own nasal catarrh was cured at once. This was remarkable, as most physicians know that puerperal bronchitis is almost impossible to cure. The rest of the family were relieved not so much. Still they got sleep at night, which was before almost lost from the incessant coughing of a family of children. Measles and whooping cough during the year had invaded the house, and since then one child died from membranous croup, which an autopsy showed to have invaded the larynx alone. Finally two adults in the other part of the house were cured by the sulphur.

14th. *January 9th, 1879.* On returning from New York, I found my wife sick—taken in the night of Sunday previous. She awoke from a sound sleep, with violent cough in paroxysms, with itching, heat and burning in the upper part of the chest (not the nose), chills, fever, pain all over, etc. On Monday she felt a great weakness in her knees, so as to trouble her in walking. On Tuesday and Wednesday, the symptoms increased. She began to sneeze and nose to discharge; appetite gone; felt sick all over. At 9 P. M., her eyes were red, injected and watery; nose red. She had cough; chest uncomfortable, and it hurt her to cough. This day, I could not find any asthmatos, in the copious, clear, glairy secretions.

Salicylate of soda, thirty grains to the ounce of water, atomized and inhaled immediately, relieved the cough and irritation. On the 11th, some cough, but she was improved. Two characteristic forms were found. Recovery soon followed.

15th. My son, three-and-a-half years old, on January 10th, at breakfast, was pale and would not eat. Being in the charge of his mother, I supposed he had contracted the asthmatus from her. During the afternoon, I found him with high systemic fever: eyes red and watery; face flushed; sneezing: I found a great abundance of the asthmatus in the nasal excretions. Some were dead and some were alive. They had a large body and small head, covered with feet. Some were round. The child had refused to inhale the salicylic acid. Now paternal authority intervened. Once inhaling, he was so much relieved that he kept calling for the "matomizer" as he termed it. With its use, the bad symptoms subsided and the next day he was quite well.

Per contra. The widow and children with whom my family board, also took the same cold. They showed somewhat the natural history of the disease. They are even now coughing, save a daughter whose nocturnal cough was so continuously loud as to disturb the house. After my wife caused her to inhale some of the salicylic acid, she ceased to cough and slept all night. Homoeopathy explains this story.

Remarks. It seems to me that enough is said to convince any one that Dr. Salisbury has pointed out something that the medical profession needs to know and study. I have tried to discharge my duty in this matter. It remains for me to reply to a criticism from the pen of Prof. Leidy—confessedly the authority on the rhizopods in this country. He refers (*American Journal of Medical Sciences*, January, 1879), to my previous paper, and in his paper he has given a model of criticism, which I hope all critics may imitate. In effect, this gentleman states that he has observed these forms before, and has regarded them as deformed ciliated epithelial cells; and that, from a careful study of his own case, he sees no reason to depart from his previous opinion. If it is an animal, he thinks it an infusorium and not a rhizopod.

I stated (*Va. Med. Monthly* October, 1878) that some authors include the rhizopods under the head of infusoria. I called these forms root-footed animals, because I think it is

more specific than infusorium. If this were a matter of pure natural science, I should be ready to yield to my courteous and fair instructor; and even if he insists on it, I will give up the name. Dr. Leidy judges from the naturalist's view, while I look at the clinical side of the question also.

My opinion is based on Dr. Salisbury's thousand cases, and hundreds of my own. I prefer that the question be not closed until my critic has had some clinical experience; and then, if he does not see fit to agree with the man who has seen the most of this disease and longest, we will be satisfied to let the matter rest.

Meantime, while the savans are settling this question, there is nothing to prevent the practical physician from testing and using the parasitocides; or else doing as in the case of yeast. This is a fungus that has been studied more than any other fungus, and for 25 years. Yet one set of observers say it buds: another set says it don't bud. One says it has mycelial filaments; another set says it has no mycelial filaments. One says that it divides; another that it don't divide—and so on. It would seem that there should be no such division of opinion upon so common and easily studied a plant. Still, mankind probably will use yeast in raising bread, not waiting till the morphology question is settled. So it seems to me that until a better mode is suggested, we must use inhalant remedies for the severe forms of contagious colds. For whether the forms are protoplasmic tissues or animals, I feel that a debt of gratitude is due to Dr. Salisbury for the discovery of means that rapidly relieve this disease. He has added an effective contribution to the armamentarium of respiratory tract therapeutics.

In closing, I may say that Dr. A. F. Pattee, 94 W. Springfield street, Boston, and Dr. William D. Hooper, of Liberty, Virginia, have announced their discovery of the same thing, not being aware of Dr. Salisbury's or each other's discovery. They both deserve the honor of being discoverers, and I know Dr. Salisbury will gladly acknowledge their claims, though they succeed to his. No doubt there are many others, in like circumstances. All that is asked for is a fair discussion and investigation.

P. S.—To those who would like to study the movements of separated epithelium cells, I would say they may see them on the proximal part of the so called “head” of the common salt water clam. These I studied before the publication of my last article.

20 Tremont Temple.

ART. IV.—**Electricity in its Relations to Medicine and Surgery—**
Electro-Surgery. Lecture VI. **I. Needles, etc., for Electrolysis**
—II. Electro-Cautery. By A. D. ROCKWELL, A. M., M. D., Member
of the American Neurological Association; Electro-Therapeutist to New
York State Woman's Hospital, etc., New York.

(Continued from page 944 March No., 1879.)

At the last meeting of the New York State Medical Society, Dr. Geo. H. Fox presented a paper “*On the Permanent Removal of Hairs by Electrolysis.*” A fine platinum, or irido-platinum wire is attached to the extremity of the negative cord. This is to be inserted into the hair follicle to a depth sufficient to reach the hair papilla, and the circuit is completed by the application of a small sponge-tipped positive electrode to the surface of the skin in the neighborhood. From five to eight cells of an ordinary zinc-carbon battery may be employed, and the current allowed to act until a destruction of tissue is indicated by a slight frothing around the needle, at the mouth of the follicle. This will necessarily occasion a certain amount of pain, but no more than most ladies will joyfully undergo in the hope of getting rid of their superfluous hair. Where the follicles are large, as on the cheek, the hairs should be removed before the insertion of the needle. Where the follicles are small, it is better to insert the needle beside the hair, and, if the papilla is reached by the point of the needle, the success of the electrolytic action will be shown by the ease with which the hair can be extracted. The operation requires a good light, a sharp eye,

and extreme care on the part of the operator; and with these, according to Dr. Fox, gratifying results may be expected.

I. Needles with Various forms of Holders for Electrolysis.
(*Kidder.*)

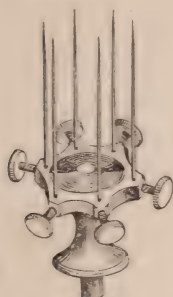


FIG. 12.



FIG. 13.



FIG. 14.



FIG. 15

Although the holders above illustrated are occasionally very convenient, yet, as a rule, I prefer to have the needles fastened separately to the electrode by flexible wires. The only objection to this method is, that interruptions in the current are apt to occur during the operation, unless the wires are sufficiently flexible and very carefully adjusted. It will be observed that figures 12 and 14 have each six needles. Now it is impossible to thrust all these at once into any tissue of ordinary consistency; hence in any case where the needles can be successfully used, grouped in the manner above indicated, I have been accustomed to introduce each one separately, and when they are all in position, to fasten them to the holder.

Figure 15 is a double edged spear-shaped knife for electrolysis. I have often used this very successfully in undermining and removing bodily malignant growths, especially those of an unusually vascular character. At the same time that the tumor is removed and the hæmorrhage checked, the electrolytic action causes a very decided destruction of the underlying tissues.

II. Galvano-Cautery.—In the light of Ohm's law, as well as in the light of experience, the erroneous notion that large cells have any marked advantage over small cells for electrolytic operations, becomes sufficiently evident. It has been seen that for the effective electro-chemical decomposition of any organic compound, we require quite a number of cells of medium size. If they are very large, we have a bulky, unwieldy battery, which, by no means yields any adequate compensating advantage of increased chemical power. If, on the other hand, the cells are very small, although they will, for a brief period work to entire satisfaction, their reserve power is so small that they yield little steadiness of current; this again fluctuates from moment to moment, and owing to the polarization of the elements and the deposition of the salts in the solution, rapidly weakens. For the purposes of *galvano-cautery*, however, large cells, strongly charged, and from two to six in number, are required.

Now, as it has been found by experiment, that the heat developed by the current in any wire is proportioned to the resistance of the wire, and as platinum offers a greater resistance to the passage of the electric current than any other metal (except mercury and lead), it alone is used in *galvano-cautery*. Though platinum wire resists the current very powerfully, as compared with silver or copper wire, it offers a very small resistance as compared with water, or the human body, or *very long* wire of any kind. Hence, in the *galvano-cautery* instruments, the *external* resistance is small, being not very much greater than the internal resistance of the batteries—perhaps not so great. Before a large external resistance—the human body, or very long coils of wire—the surface of elements is used to the best advantage when cut up into small cells. Before a small resistance, the surface of the elements is used to best advantage when cut up into a few large cells; or if the external resistance be very slight indeed, a single large cell will answer; for it has been shown that, in a short circuit, one cell gives as much quantity of electricity as one hundred, or, indeed, any number.

By *galvano-cautery*, then, we understand cauterization by a resisting wire heated by the galvanic current—the electri-

city itself not being applied to the body as in the various forms of electrolysis, but only the wire heated by the passage of the current. However obtained, heat is heat; and consequently the heat obtained by galvanic action has probably no advantage, as such, over that obtained by thrusting cauterizing irons into glowing coals. The great advantage of the galvano-cautery over the actual cautery lies not only in the fact of the complete and perfect control that the operator has over the first, even in prolonged operations, but that it enables one to operate on portions of the body ordinarily inaccessible, and by methods impossible with the actual cautery. In those conditions for which it is adapted it possesses various advantages over the knife, one of the most important of which is its well-known power to prevent all or nearly all hæmorrhage. Hence, certain operations which would, by the knife, be attempted with dread and attended with danger, become, by the use of the galvano-cautery, perfectly simple and safe. Like electrolysis, it is often followed by a more satisfactory healing than by the knife or ligature, and by a decreased tendency to pyæmia.

The purposes for which electro-cautery have been recommended and employed are numerous, and the indications for its use will readily suggest themselves to every surgeon. Its best results are, perhaps, obtained in the removal of tumors situated in parts not accessible to the ordinary methods of extirpation, and for the removal of growths that are exceedingly vascular, and especially those of malignant character. For the various purposes of cauterization, this is, of course, a ready and effective method. It can be used also with advantage in certain cases of fistulæ; but the treatment of neuralgia by cauterizing and killing the nerve, and of treating prolapsus uteri by cauterizing with the burners the vaginal wall, thus causing inflammation, suppuration and cicatricial contraction, are heroic measures in which I have had and desire no experience. To properly care for and utilize the galvano-cautery, demands not a little experience, together with that attention to detail, which is so especially requisite in every department of electro-therapeutics.

The ordinary galvanic apparatus used in electro-medicine

and for electrolysis can be used many times with the same fluid; and when its strength begins to weaken, a little addition of new fluid will increase its efficiency. In the galvano-cautery battery, however, not only must the solution be much stronger, but for each operation it must be renewed. Previous to an operation, the apparatus should be thoroughly tested, and the platinum wire and knives, and especially the handles, carefully examined, in order to detect any incomplete connection or faulty working of the screws or wheels. Before the circuit is closed for the generation of heat, the wire loop should be accurately adjusted; and when encircling mucous membrane, should not be strongly contracted until the sub-mucous tissue is reached. When passing through superficial or cellular tissue, the wire should not be brought to a white heat. It should be remembered that the amount of heat generated may be too great as well as too little, and, therefore, the adaptation of current strength should be according to the thickness and length of the wire loop, or size of the cautery knife used, and the vascularity or dryness of the tissue acted upon. If the wire loop be very thin, and the quantity of electricity large, there is great danger that the wire may break before the close of the operation, and cause serious annoyance. If, on the other hand, the quantity of electricity be insufficient, the platinum, whether wire or knife, will become incompletely heated, fail to cut through the tissues thoroughly, and thus increase the danger of hæmorrhage.

Again, when exceedingly vascular parts are to be cut into, as, for example, in amputation of the cervix uteri, it is of the first importance not to use too small a wire. Brought to a white heat, there is not only a possibility that the wire may become fused, but the rapid severance of the tissues is almost sure to be followed by considerable hæmorrhage. By the use, however, of the larger sized platinum loop, amputation of the cervix and other vascular parts is often accomplished without the loss of a drop of blood. In these operations it is safe to use the largest wire that the battery at hand will successfully heat. Towards the close of the operation, as the loop becomes gradually reduced in size, the elements should,

by an assistant, be gradually lifted from the solution, thus reducing the quantity of electricity generated.

At every step of an operation, an assistant is needed, whose exclusive duty it should be to see to the working of the apparatus; to raise or lower the cells and to attend to the peculiar manipulation required (whatever it may be), by the battery in use, by which the polarization of the elements are prevented and the current strength increased. The management of the immediate instrument for operation will require the sole attention of the operator. Where malignant growths are to be removed, the wire loop should encircle the healthy tissue as well, so as thoroughly to extirpate the diseased portions. In cases where the situation of the growth is such as to render this impossible, the cautery knife can, in the latter stages of the operation, be often substituted with great advantage for the wire. In all cases, traction of the wire should be very gradual, little force being used for fear of breaking it; but at the same time it should be constantly borne in mind that if the heated wire is not kept taut and closely pressed into the gradually yielding substance of the growth, there is danger equally great that the platinum loop, relieved of the cooling influence of the blood and moist tissues, may yield through fusion, instead of force.

Apparatus for Galvano-Cautery.—The advance in the construction of galvano-cautery batteries during the past decade has been very great. Apparatus combining portability with power, are readily obtained, and those manufactured by Kidder and the Galvano-Faradic Manufacturing Company and the instruments of Dawson & Byrne are all of great efficiency.

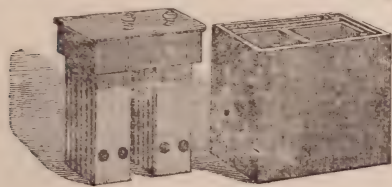


FIG. 16.

The most successful attempt to combine a suitable degree of strength, with compactness and lightness, has, perhaps, been made by Kidder in the battery represented by Fig. 16. It is composed of but

two hard rubber cells, with elements of zinc and carbon—each cell measuring $3\frac{1}{2}$ inches in length, $2\frac{1}{2}$ inches in width,

and will retain a number 19 platinum wire at a white heat for more than a quarter of an hour. The elements are made to move on small wheels horizontally, in their relation to the fluid in the cells. This is a great improvement on the old method of blowing with an air bulb for the purpose of producing agitation of the fluid, and consequent increase of current strength, and seems to me to more thoroughly displace the battery fluid than any other method. For very prolonged operations this little battery is hardly sufficient, and should be replaced by the larger form, consisting of four cells.

Figure 17 represents the Piffard galvano-cautery battery, and is not only reasonably compact, but exceedingly efficient. The box contains six cells of vulcanite and a platform of hard rubber, to which are fastened the zinc and platinum plates. On the top of the platform are seven conducting posts, six connecting screws and a handle (used in connection with the long arm) for holding the elements when not in use and by which they are lowered into, or taken from the cells. For the purpose of agitating the fluid and increasing the cautery power, there are pivots on each side of the platform, by means of which the elements are readily moved with a rocking motion. The box enclosing the cells is 9 inches long, $6\frac{1}{2}$ inches wide and ten inches high.

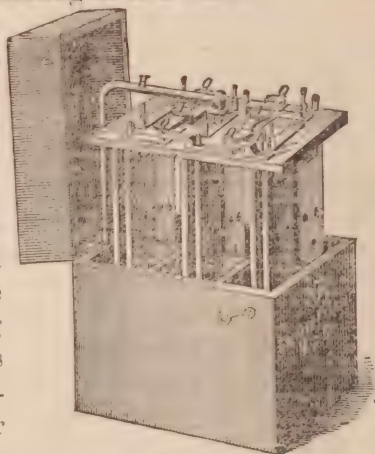


FIG. 17.



FIG. 18. Cautery handle with loop, ready for operating.

Figure 19 illustrates the manner in which the holder is best grasped for the purpose of drawing the loop in amputa-

tions. With the thumb in the slide, as indicated, the sweep of the hand is greater than by any other method.

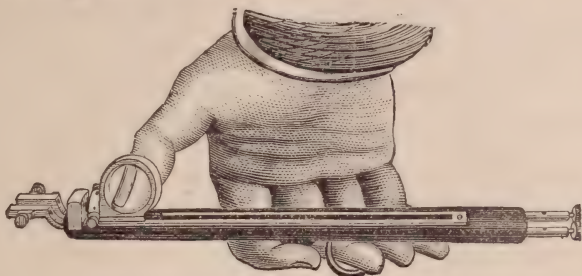


FIG. 19.



FIG. 20. Handle for platinum knife or burner, with spring for closing and interrupting the circuit.



FIG. 21. Platinum Knives and Burner.

The following operation by the galvano-cautery is a good illustration of its value and efficiency.

CASE XXI.—I was requested by Prof. James R. Wood to see with him a patient from whom he had some time before removed a cancer of the lip. The man was now suffering from a larger growth of a malignant character, situated on the right side of the neck, and adherent apparently to the hyoid bone. The tumor was so exceedingly vascular that it was thought not expedient, by Dr. Wood, to use the knife, and he therefore determined to try the galvano-cautery. The patient having been etherized by Dr. J. W. Hunt, Dr.

Wood proceeded to dissect back the skin; but the substance of the tumor was found to be so thoroughly broken down, that it was resolved to extirpate thoroughly, without regard to its covering. The circumference of the tumor was so great, that instead of attempting to encircle the whole at once, Dr. Wood pierced it at its base and centre by a grooved director, and along this I thrust the free end of my platinum wire, and as it came out at the opposite side, it was fastened in the other half of the operating handle, thus forming a loop around one-half the tumor at its base. The circuit was now closed, the loop gradually contracted, and the amputation of the portion enclosed speedily accomplished. The other half of the enlargement was, in the same way, readily cut away. Substituting now the cautery knife for the wire, as much of the underlying tissue was removed as could be with safety attempted, owing to the position of the disease. During the operation, only an insignificant amount of blood was lost, and but one small artery called for ligation. No untoward symptoms followed, and the patient made a good recovery.

Clinical Reports.

Cases of Litholapaxy (Bigelow). By L. McLANE TIFFANY, M. D.,
Professor of Operative Surgery University of Maryland, etc., Baltimore.

Litholapaxy at a single sitting, as an operation, has been before the profession for too short a time to permit a decision being made as to what cases should or should not be subjected to it, and the following is reported with the laudable intention of assisting investigation in a direction of such vital importance:

A. H., aged 49, a strong, hearty man, farmer by occupation, came under observation during January, 1879. He gave a history of frequent and painful micturition during the past eighteen months, occasionally passing blood during the past six months. He passes urine ten or twelve times nightly; pain severe, and sometimes referred to glans penis. The urine contains some blood and pus; no casts. Examination by sound revealed a calculus, having a phosphatic surface probably. Being measured by the lithotrite, the stone was judged to be $1\frac{1}{4}$ inch long by $\frac{3}{4}$ inch broad.

Lithotrity by Bigelow's method was performed Feb. 1st, 1879. The lithotrite was used twice; the washing-out apparatus twice—the largest tube of the instrument (No. 22 E) being employed. Ether was the anæsthetic agent used. Time of anæsthesia, 35 minutes. The calculus was phosphatic, with very small nucleus of uric acid. A few fragments were lost; weight of residue when dried, 110 grains. Quinia sulphate gr. xx given prior to operation.

Temperature of patient after operation, 97.5° ; pulse, 100. Evening temperature, 100.6 ; pulse, 100. R. Morph. sulphat. gr. $\frac{1}{4}$ hypodermically.

Feb. 2. Morning temperature, 99.5° ; pulse, 85. Patient sits up in bed and receives his friends. Suffers no pain; passed water six times during the night; water somewhat bloody, but no pure blood was passed. R. Acetate of potash in flaxseed tea during the day. Also, R. Quin. sul. gr. x morning and night. Evening temperature, 99.5° ; pulse, 85.

Feb. 3. Morning temperature, 99.2° ; pulse, 85. Passed a capital night; suffers no pain; eats well; bowels not moved. Urinated three times during the night; urine clear. Patient allowed to get up. Evening temperature, 99.4° ; pulse, 70.

Feb. 4. Morning temperature, 98.5° ; pulse, 98. He had a comfortable night; passed water twice; no pain; complains of constipation. Patient freely purged with compound cathartic pills, after which the pulse fell to normal.

Feb. 5. Patient returned home. So far as could be seen, well.

Comment on the above case is needless; for an operation which is able to relieve a man of a calculus weighing two drachms and return him well to his family in five days is beyond criticism, in the present condition of operative surgery.

Several times while the bladder was being washed out, fragments lodged in the catheter, but by reversing the current, they were promptly displaced.

That the same method of removing calculi may be used with advantage in the female is well shown by the following case, which fell under my care two years ago:

Mrs. Blank, aged 55 years, married, mother of four children, came under observation Feb., 1877. Symptoms of stone had existed for three years, and she had occasionally passed "some gravel." Examination by sound revealed the existence of several calculi. Patient being etherized, the

urethra was rapidly dilated, and the finger passed into the bladder; two calculi were found, crushed, and the fragments washed from the bladder with an ordinary Davidson's syringe. The stones were phosphatic. The dried fragments weighed 250 grains. Incidentally, it may be noted that the nucleus of each stone was an adult molar tooth.

Twenty-four hours after the operation, the patient was out of bed, having control of her bladder. The second night after the operation she passed water but twice.

Five days later, she returned home.

Successful Treatment, by Blood Letting, of a Gunshot Wound of the Chest, Involving both Lungs, and Complicated with Fracture of the Scapula and Paralysis of the Left Arm. By M. H. CRAWFORD, M. D., Assistant Surgeon U. S. Navy, U. S. Steamer "Tuscarora," Coast of Mexico.

Josie Tobarez, aged 30 years, a native of La Paz, Mexico, occupation a pearl diver. He is robust, and a man of excellent physique. Tobarez received a gunshot wound of the chest at 5 P. M., Sept. 8, 1878. The shot was fired by a policeman, and, judging from the direction the ball pursued, he was in the rear of the patient. The bullet fired was conoidal in shape, and of the largest size Colt's revolver. The ball entered the back, passing through the right scapula, fracturing off about one inch of its inferior angle, and, pursuing its course obliquely upwards and to the left, through both lungs, and made its exit between the left clavicle and first rib. The point of exit was about one inch from the sterno-clavicular articulation of the left side. I was called in to see the patient twenty-four hours after the reception of the wound. He was visited by a Mexican doctor, who consoled the poor creature by saying nothing could be done, and he was sure to die.

On introducing my finger into the posterior opening, I found a transverse fracture of about one inch of the inferior angle of the right scapula. There was scarcely any hæmorrhage from the wound. He had considerable dyspnoea, with marked traumatapnoea. Pulse full and quick. Has great pain in the left lung and arm, and marked paralysis of the left arm. He also suffered from complete insomnia and anorexia.

Treatment.—The wound was cleansed thoroughly, and

small pieces of cotton lint saturated with a dilute solution of carbolic acid and cold water, were applied. The fractured scapula was adjusted as near as possible, and the whole chest secured firmly by adhesive plaster, and the latter was afterwards covered by cotton roller bandage. He was then placed on his back in bed. I ordered ten grains of calomel at 8 P. M., to be followed at 4 A. M. by magnesiæ sulph. ζ ss. I also administered a hypodermic injection of morphine (Magendie's solution, gtt. xv) at once, which is to be repeated in a half hour if the patient is not relieved. R. Antimonii et potass. tart., gr. ss. Fit chart., No. 18. S. One paper every four hours.

Sept. 10, A. M. The patient had rather a restless night. Pulse 100 per minute, full and strong; tongue coated with a yellowish white fur. Has intense dyspnœa—the breathing being short and deficient, and almost entirely abdominal. Bowels moved quite freely. Temperature, 100°F. Face flushed, with intense headache. He complains of great pain in the left lung and arm; has total loss of motion in the left arm. Slight dullness on percussion, and increased bronchial respiration over the left lung. I removed ten ounces of blood from the arm, which gave great relief, diminishing the force and frequency of the pulse, and relieving the dyspnœa. Continue morphine, gr. $\frac{1}{4}$, every four hours. To have light diet.

Sept. 11, A. M. The patient had a pretty fair night, after taking two doses of morphine. Pulse 80 per minute, and not so strong. Dyspnœa not so intense. Traumatapnœa continues. Temperature 99°F. Has a slight discharge from the posterior opening. The patient complains of excruciating pain in the chest and left arm. Appetite very poor. Has a cough, with slight hæmoptysis. Continue morphine and lotion of carbolic acid. Ordered quinine, gr. iij, *ter die*.

Sept. 12, A. M. But little change in condition since last evening. Pain in the arm and chest not so intense. Discharge from the wound very scant. Hæmoptysis less. Continue same treatment, with the addition of olei ricini ζ ss.

Sept. 13. Feels better. Had a good night's rest, after taking two doses of morphine. Pulse rather weak. No appetite. Bowels moved freely. The posterior opening is gradually closing up. Continue morphine and quinine, and order milk and egg diet.

Sept. 14–15. The patient is improving very slowly. Pain and dyspnœa continues. No physical signs of pneumonitis, except the localized wound of the lungs. No change in treatment.

Sept. 16-18. Patient is doing well. Posterior opening has closed. Dyspnœa less. Traumatapnœa ceased. Ordered brandy $\mathfrak{z}\text{j}$ *ter die*, and nutritious diet.

Sept. 25. The patient is improving nicely. Has recovered slight motion in the arm. Pain in the chest has ceased. Ordered the affected arm to be rubbed well, and exercised during the day.

Oct. 1. Patient is doing well. The anterior opening has closed. Motion in the paralyzed arm is improving. The fractured scapula is uniting nicely. Discontinue morphine, and order nutritious diet, and continue friction to the arm.

Dec. 10. The patient has made a complete recovery. Has almost recovered entire motion of the left arm. The scapula has united firmly, with scarcely any deformity.

Remarks.—The paralysis of the left arm in this patient was undoubtedly due to the division of one or more of the cords of the brachial plexus of nerves. Most authors on military surgery of the present day are strongly opposed to blood-letting, or antiphlogistics of any kind, in the treatment of gunshot wounds of the chest and lungs. I think, though, in a case like the above, occurring in civil life, where the man is robust and strong, with a full, bounding pulse, that blood-letting is the most beneficial treatment that could be used.

Protrusion of the Stump of the Pedicle through the Cicatrix More than Three Years after Ovariectomy—Deligation of the Protruding Part, and Complete Recovery. By HENRY P. WENZEL, M. D., Lomira, Wisconsin.

The writer's extensive researches in medical literature and in the journals has failed to find a similar case to the one here reported; and so far as he knows, this is the first case of protrusion of the pedicle-stump so long after ovariectomy.

Rev. Mr. C., desired me to visit his wife at once, on Dec. 25th, 1878. Something had come through the abdominal walls in the linea alba. I found the patient excited, in bed, with accelerated pulse, but no fever; skin moist; eyes clear, and tongue clean.

History.—During 1875, the lady's health failed. Her abdomen enlarged, and she was troubled with symptoms of ascites. She was tapped several times, and large quantities of

water were drawn off. Ovarian tumor was discovered, and ovariectomy performed by Dr. Senn, on Dec. 7, 1875. There were no adhesions; the peritoneal cavity was filled with serum. The pedicle was secured with a Spencer Wells' clamp. The patient made a good recovery in an incredibly short time, and has remained in good health until a short time ago. She is now 58 years old. The tumor was solid, inelastic, had a tuberos surface, and was of a pearly color; weight, 8½ pounds. It was connected with the right ovary. The peritoneum was closely adherent to the tumor.*

The patient has lately been visiting her brother-in-law, Dr. A. W. Luck, whose wife and himself were ill. She did the nursing, and was overworked. When the Doctor died, she passed through a state of intense excitement. She wore a belt to protect the cicatrix, which cicatrix extended from the pubic arch upward beyond the umbilicus. The belt was entirely too narrow to subserve its purpose. She noticed nothing unusual, nor did she feel any pain before or during the excitement.

A few days after the Doctor's demise, a small, oval elevation presented itself in the cicatrix, three inches above the pubic arch, which was taken for a hernia. It caused neither pain nor annoyance, and no further attention was given the tumor. The evening previous to the writer's visit, an indescribable sensation overcame the patient, and, on examination, they were horrified to find something protruding from the belly. There was no pain. There was no indication of inflammatory symptoms. The rapid pulse-rate was doubtless due to fright.

The stump protruded an inch and a-half through the cicatrix, was very pale red, and an inch in diameter. It had a peculiar, penetrating, fetid odor, somewhat similar to that emitted by bleeding warts on horses. The extremity was conical in shape, and solid, and there had been adhesions to the abdominal parietes or peritoneum by a few frail fibres only. The stump was hard and fibrous. It could be distinctly outlined, by manipulation, in the abdominal cavity, as a thick cord, extending downward. The mass was seized and pushed back; no pain resulted; it was drawn out further than before, and a lifting sensation, referred to the uterus, occurred in the pelvis. The cuticle around the protrusion was redundant, and lay in folds. There was no tympanitis, swelling or pain around the mass.

*For a report of the case of ovariectomy, see *Transactions Wisconsin State Medical Society*, 1876, pp. 123-5.

The assistant seized the stump with a volsella forceps, and pulled it out about 2 $\frac{3}{4}$ inches. A strong, waxed, silk ligature was thrown around the stump, *below* the level of the cutis, by the writer. No pain resulted from or followed the operation. The wounded surface was dusted with pure salicylic acid, and adhesive strips were applied. A carefully adjusted bandage completed the dressing. Rest was enjoined in the recumbent position.

Three days later, the deligated mass and the ligature came away. The stump had disappeared from view. The wound was again dressed as before and a roller bandage applied from the umbilicus downward. A week later the dressings were again renewed, and the patient allowed to get up.

On *January 16, 1879*, the wound was completely closed—an inch long linear cicatrix, in the old cicatrix. The salicylic acid destroyed all fetor. There was no medicine administered internally. The patient now wears a modified McIntosh supporter devised by the writer, and is able to attend to her household duties. There is no pain or annoyance whatever.

Remarks:—I do not believe, that the pedicle was ever united to either the peritoneum or skin, save by a few very thin fibres. The hypertrophy extended in length and circumference; this change went on slowly. The progress was so insidious that the patient failed to notice a protrusion—rather, a small tumor—for a long time. The operator communicated to the writer that a deep depression existed at the seat of the stump of the pedicle after ovariectomy, and that he feared the pedicle was too short and was drawing on the cicatrix.

Now comes the question: How was this pathological result achieved? It is one of importance, yet cannot be definitely decided. Hypertrophy usually follows hypernutrition, and this an excessive flow of blood to the parts. If we accept the irritation theory, and look for the cause in the nervous system, some form of irritation must have caused this determination or excessive blood supply to the stump. In this case the patient recovered in a very short time, and was, at least, apparently well until the protrusion presented itself. Some imperceptible agency must have been at work slowly, and surely developed the stump by excessive nutrition. However, this view is opposed by the bloodlessness of the mass

and the rapid degeneration—feter, etc.—after it protruded through the abdominal walls. The source of irritation and increase must have come from the outer end—from the uterus. The ovarian artery was cut during the ovariectomy, and the small branches from the uterine artery furnished the material for the hypertrophial mass. The Fallopian tube could not be found when I deligated the stump, it was either absorbed or formed a part of the stump. The stump was solid and composed of fibrous tissues only.

Conclusion.—Hypertrophy resulted slowly and the weak cicatrix was gradually pushed out by the stump. The inattention to proper protection of the cicatrix, and the excitement only hastened the final result.

Case of Puerperal Eclampsia (Reflex) successfully treated by Potassium Bromide, Chloral Hydrate and Morphia Sulphate.

By THOS. J. WARD, M. D., Recording Secretary Baltimore Medical and Surgical Society, Baltimore, Md.

I was greatly interested in reading the article by Dr. P. C. Williams, of our city, in your February number, as I had a very interesting case to come under my treatment.

I was called to see a case of a young married woman, aged about 23 years, who seemed to be in excellent health, and said she had not been sick since she was a child. She was complaining of trifling pains in her back, and expected to be confined on any day.

I was called again on the next morning about 6 o'clock to see her. She was walking the floor, and complained of the pains in her back. I made an examination, and told her I did not think that true labor would set in before night, but would see her again in two or three hours. I returned about 2 P. M. from my morning's round, and found her about the same as I had left her in the morning, but she insisted upon my remaining with her until the labor was over. About 6 P. M., true labor set in, and she was delivered of a large and apparently healthy child at about 12.15 A. M. Before I had time to separate the child, the mother went off into a convulsion. Fortunately, I had a two-ounce vial of chloroform with me, and gave her chloroform by inhalation, which controlled the convulsion very quickly. I then cut the cord, and waited about fifteen minutes for the expulsion of the

placenta, but then had to take it away. My patient rested comfortably and quietly, until about 6 o'clock next morning, when she had another convulsive attack, and for this I also used chloroform, with the same good results as before, and I left my patient at about 8 o'clock. I returned about 11 o'clock, and was informed she had had no return of convulsion, and everything had been going on well.

While sitting at my dinner table, about 2½ P. M., I received a message from my patient's mother to come immediately. When I reached the bedside of the lady, I found her in another convulsion, and was informed I had scarcely gotten a block away from the house, before she had another attack; but the attendants having seen me use chloroform, they took it upon themselves to do likewise, and they controlled the convulsion. The convulsion in which I saw her was the fourth she had had. I then decided to call in a consulting physician; and when he arrived, we bled the patient, but she had two convulsive attacks afterwards. We then decided to give her the following:

R. Potass. bromid.....grs. xxx

Chloral hydrat.....grs. xx

Aque.....℥ss M. S: One dose.

This we gave every hour for about ten hours, and after the first dose was administered, we had no return of convulsions or any further trouble. I continued the same treatment, only giving 5iij doses, instead of ℥ss, for about six hours, and then reduced the dose gradually until 5j doses of this mixture were given every hour.

I concluded, as there was no albuminuria, the convulsions were reflex, and think the blood-letting did no good (though it is recommended by some authors) in this case. I attribute the good results solely to the potassium bromide, chloral, and the morphia, which latter I forgot to state was also given in small doses. The patient got up on the tenth day, and both she and her child are as well and healthy as one could wish—the child being now several months old.

127 St. Paul Street.

In the *Berliner Klinische Wochenschrift*, Nos. 24, 25, 1878, Professor Hueter reports the successful treatment of seventeen cases of erysipelas by the subcutaneous injection of carbolic acid. Details in translation may be found in the *Medical Times and Gazette* for September 7th.

Correspondence.

Yellow Fever Commission—Note on the Review by Dr. Burroughs in March Number, 1879.

Mr. Editor—I beg for a short space in your journal that I may make some reply to a paper in your March number, 1879, entitled "Origin and Nature of the Late Epidemic of Yellow Fever—Report of the Yellow Fever Commission Partially Reviewed," by Dr. J. J. Burroughs.

Whenever an individual, or a selected commission, consents to offer any description of report upon a scientific subject, the work is at once placed within the legitimate purview of scientific examination and criticism. The authors may offer, in extenuation of their short-comings, the plea of lack of time and opportunity adequate to a thorough report; but true science may still deal mercilessly with such offenders, and incur no charge of lack of conformity to character. Perhaps, a love for this attribute, and a determination to aid in enforcing a proper degree of respect for it, have led Dr. Burroughs to assail the "Report" of the Yellow Fever Commission.

I do not regard it as at all necessary to occupy your space or my own time in discussing the character and credibility of those assumed "facts," which have been, or may in future be, recorded by myself or colleagues in the work of reporting upon the late epidemic. They must stand or fall, accordingly as they may be supported by such intrinsic or circumstantial evidence of reliability as may attend their presentation. I do not, however, think a partial report of a fact, or facts, should be invalidated because the events whose history they record are not complete at date of their publication. If the elder Pliny had left us a record of the eruption in which he perished, it would have been accepted as truthful, although it failed to include the final destruction of Pompeii and Herculaneum. Those engaged in the former partial report, and now engaged upon the forthcoming and more complete report, will hold it to be conscientiously their duty to weigh

all alleged facts, now in possession or to be obtained. They also hold it to be their duty to test hitherto ascertained facts by new testimony, whenever occasion occurs, and, as far as possible, to reject all which are not satisfactorily substantiated. We trust Dr. Burroughs will have the grace to try to imagine that our eyes are quite as cognizant of the dawn of a new light as his own. He is certainly in error, if he supposes that personal opinions are to be substituted for what we suppose to be facts. But, on the other hand, he need not torture either himself or your readers with ill-founded speculations as to what may be announced as ultimate facts, or the conclusions deduced therefrom, inasmuch as he has neither read them, nor corresponded with those engaged in collating and preparing them.

But in the ardor of his assault, Dr. Burroughs is not always careful to cover his own person. He says "the tenor of the whole report seems to be strongly inclined to the belief in the contagiousness of yellow fever." They say "its transmission was wholly due to human intercourse; that the poison was carried in the clothing, or about the persons of people, in baggage," &c. Dr. Burroughs adds, "Then why was not every person who came in contact with it infected?" Now, imagine Dr. Burroughs teaching physiology, and gravely putting an analogous question to his class. If females are impregnated by connection with males, why are not all females impregnated who expose themselves by this act?

Then, again, the Doctor comes in with a conclusion so authoritatively uttered, that he must have been only partially awakened from dreams of his own infallibility. He says, "The only certain and sure prevention of yellow fever, is to absolutely and successfully quarantine the *wind* from the 1st of April to the 1st of November of each year." Now, it does not seem to occur to Dr. Burroughs that there is the least necessity of fortifying his assumptions by facts; yet those who honestly and earnestly study the spread of yellow fever in 1878, and keep in view the relation of the various localities and dates of the outbreaks, one with another, will before long conclude that "*winds*" which only follow lines of human travel, and which are circumspectly watchful that

they shall never go faster than human conveyances, are among the most curious of all meteorological performances.

But, Mr. Editor, we should all combine in one great endeavor to arrive at a knowledge of yellow fever, and its mode of action. For this purpose, we should *invite* criticism and not *reject* it; but, at the same time, it is well to give it, when possible, a direction calculated to render it in the highest degree profitable.

Respectfully, &c.,

S. M. BEMISS, M. D.

558 St. Charles street, New Orleans, March 19, 1879.

Davidson's Syringe suggested for Ear Syringe to dislodge Foreign Bodies, Wax, &c.

Mr. Editor,—In your February number, 1879, is an abstract of Dr. J. Marion Sims' article upon extracting foreign bodies from the ear by means of a syringe. A cut is appended of the most approved and convenient instrument, made especially for this purpose. But as your journal circulates largely among that class of practitioners whose want of means renders their stock of instruments sometimes distressingly small, the substitution of an instrument in general use for this special one, may be of some interest.

Davidson's syringe is, I suppose, in the hands of nearly all of the class to which I refer. Besides its many other uses, it can very conveniently be substituted for the hard rubber ear syringe represented by the cut in Dr. Sims' article. The small nozzle belonging to Davidson's syringe seems to be just the thing for the ear, whether made for the purpose or not. The only disadvantage that I can see in the use of this latter syringe is, that it requires both hands to work it, and an assistant, or the patient has to be employed to straighten the auditory canal; but a decided advantage to be claimed for it is, that the bulk of the instrument is not in front of the ear and in a position to obstruct vision.

Hardened wax is what we are most frequently called upon to remove from the ear with a syringe. The removal of wax is facilitated by adding a teaspoonful of bicarbonate of soda to the pint of warm water; it will soften the wax, and cause it to come away in pieces much sooner than water alone.

In this connection, I will mention a case having quite a different history from that usually attending accumulations of wax :

A lady from Baltimore, visiting the country, told me that, about two months before, she felt in the night a sharp and sudden pain in the left ear, apparently caused by turning her head on the pillow from right to left. This pain did not last long, but for several days there was soreness about the ear, and deafness was marked from the first. She consulted her physician, but he, *without making an examination*, said *it would soon get all right again*—which prognosis was not verified, as her hearing did not improve in the two months. She could not hear a watch tick when it was pressed against the ear.

Upon examining with an ear speculum, I saw, at the farthest end of the auditory canal, what I recognized as a piece of hardened wax. This was easily removed by syringing, and the hearing was at once restored.

I account for the history narrated by supposing a piece of wax to have been somewhere in the auditory canal, remote from the drum; by pressing the side of the head against a pillow, the air in the outer ear was compressed, and striking the wax, moved it from its original position and tilted it up against the membrana tympani, thereby putting a stop to its vibrations. This foreign body, resting against a sensitive membrane, accounts for the pain and subsequent soreness.

JESSE EWELL, JR., M. D.,

Hickory Grove, Prince William Co., Va.

Original Translations.

From Spanish and French. By CHAS. P. CULLEN, M. D. (P. O., Richmond, Va.), Hanover county, Va.

New Instrument for Reducing Dislocations.—At the French Exposition an account of a new instrument for reducing dislocations was exhibited, devised by M. Matthieu (*Le Progrès Medical*, No. 41). It is a modification of Jarvis' adjuster, introduced over thirty years ago. It produces extension and counter-extension, and indicates in kilogrammes the traction exercised upon the dislocated member. It consists of a straight instrument attached, for instance, in the axilla, and strapped firmly to the humerus. There is a wheel below with a crank attached, by means of which any desired ten-

sion can be produced. The instrument will, doubtless, be employed in large hospitals, and by surgeons generally.

Drunkenness in Sweden and Norway.—(From *Journal d'Hygiene*.) *Le Bulletin de l'Agriculture* publishes the original mode of treating drunkenness in Sweden and Norway. The drunkard is put in prison, and his only nourishment is bread soaked in wine. During the first day, the prisoner receives the bread and wine with much pleasure. On the second day, his food is not so acceptable. After that, he takes his food with great repugnance. In general, eight or ten days of this treatment suffices to produce such disgust of liquor, that the unhappy man is condemned to absolute abstinence. After leaving prison, his drunkenness is radically cured, with an occasional exception, and the odor of liquor produces an invincible repulsion.

Haschisch or Resin of Cannabis Indica—Its Use in Asthma and Other Diseases of the Respiratory Organs.—The family of plants to which Indian hemp belongs, furnishes two kinds of hemp—common hemp (*cannabis sativa*), and the Indian hemp (*cannabis Indica*). The latter possesses medical merits. The Arabs call it haschisch, or *the herb*—intending to express, by this term, that it is the most precious of all herbs. In Algeria, it is called haschisch al Fohma, or the Faker's herb. The intoxicating effects of cannabis have been known from remote antiquity. It is of this, the famous nepenthes, of which Homer speaks, and to whose writings it owes much of its reputation. The Orientals use it under different names, and generally with aromatics and aphrodisiacs. They smoke it and take it in pastilles electuaries, drinks, etc. It is mixed with musk, cantharides, and other medicines. It is stimulating and intoxicating in small doses. In large doses, it is sedative, and produces a sort of voluptuous stupor similar to alcoholic liquors. Under its influence, objects have grand proportions; sounds appear pleasant and agreeable to the ear, and the victim feels buoyant and perfectly happy, with a profound indifference to earthly objects, without regard to age, sex or condition. The habitual use of haschisch tends, inevitably, to imbecility or mental derangement. These details explain how difficult it is to adapt it to therapeutical uses, although the Orientals had long observed that the *haschisch-eurs* were free from pulmonary and rheumatic complaints, and only used it for sensorial pleasures. The first medical use of the drug is due to the physicians of Vienna and Berlin. French and English practitioners afterwards experimented with it. The results obtained were remarkable. They established, without doubt, that the Indian hemp was,

par excellence, a special anti-spasmodic, and serviceable in almost all affections of the respiratory passages. Its application is not limited simply to asthma, but may be used in all cases of dyspnoea. Besides this, the herb has been used in rheumatism, nervous affections, wakefulness, nocturnal erections, amenorrhœa, as a diuretic in dropsies, and Moreau, of Tours, used it in mental maladies.

Utility of Hot Baths in Secondary Hæmorrhages following Parturition.—(*Le Scalpel*.) 1. Hot baths administered to females with metrorrhagia in the month following labor, is a good remedy to moderate or stop the flow of blood.

2. This treatment appears more efficacious in the second period of hæmorrhage than in the first.

3. No bath should be taken till ten days after parturition. The temperature of the water should be 36° centigrade; the duration in the bath twenty or thirty minutes, and should then be used daily during the discharge of blood.

Can Tuberculosis be Developed by Drinking Cow's Milk?—(*Bulletin Therapeutique*.) M. Valin proposes several experiments to discover whether tuberculosis can be developed in children by drinking cow's milk. He has some doubts on the subject, but is willing to assert that children should not drink the milk of cows confined in large cities.

M. Gubler states that this is one of the most difficult questions to decide. The first great difficulty is in diagnosing tuberculosis at the outset of the disease. No one will say, in the outset, that any lesion of the lungs is necessarily tuberculosis. Many animals, *closely confined*, generate tubercles, but it has not been proved that milk will produce tubercles. It is necessary to show that the milk of beasts having tubercles will produce the same in other animals which drink it before any signs of tubercles exist.

Dr. Trasbot believed that tuberculosis in man and in animals is not identical, and that one cannot reproduce the other. He recollects the case of a calf, born of a cow with tubercular phthisis, which, after it became a cow, furnished milk to his mother, and no phthisical results followed.—*Journal de Therapeutique*.

Statistics of Births and Deaths of Lima (*Gaceta Medica*, Lima, Peru)—

Years.	Births.	Deaths.	Difference.
1836	1,853	2,850	997
1843	1,887	3,370	1,473
1857	3,168	4,826	1,658
1860	3,034	3,664	630
1877	4,727	4,840	113

In the year 1877, of the 4,840 deaths, the rate reached 46 in every 1,000 persons; and of this number 1,662 were children; such a heavy mortality hardly exists in any country in Europe. The chief reason of this great mortality of children is owing to the pernicious fever of the city, and the cause of so much fever to the little ones is owing to their exposure to all weather—being carried about by the mother, strapped to her back in a thick blanket—thus preventing fresh air, by encasing the children, and exposing them to the excessive heat of the sun, and to soaking rains. Added to this, is want of proper food, both for mother and child. Over 1,000 of these children are foundlings, and have little or no medical treatment. In all countries, marriages are favorable to the care of children, but in Lima matrimony is a rare occurrence—there being only 249 for the year 1877, or three marriages to every 1,000 persons. In France there are 8, and in England $8\frac{1}{2}$ marriages to every 1,000 persons. The statistics of all nations show that the mortality of young infants is much greater among illegitimate than the legitimate children. In Lima, the labor of women is not sufficiently remunerative, and they go about as lost sheep. The President of the Republic has conceived the idea of establishing asylums or workhouses for the care of children and mothers.

Salicylate of Soda in Phthisis and Rheumatism.—Dr. Fromatin brought before the Faculty of Medicine of Paris his treatment of phthisis with salicylate of soda, with the following conclusions by Prof. Laséque :

1. It is a powerful antipyretic, soluble in water, and agreeable to the taste.

2. Better results are obtained by large doses of from 3 to 8 grammes (45 to 120 grs.) in twenty-four hours, according to the cases.

3. In acute articular rheumatism, it is a valuable medicine, not only to diminish temperature and assuage pain, but also to subdue local lesion.

Dr. Benort sustains the same view—that fever commences lessening in twenty-five minutes after taking the medicine.

Dr. Monier states that it produces more beneficial results in subacute rheumatism, and that its action is more important in cardiac manifestations than in cerebral.

Dr. Auger confirms the views of the preceding, and that greater benefits have been observed from its use than under any other treatment in rheumatic affections. It sometimes produces disagreeable effects in females, such as nausea, vomiting, pyrosis, diarrhœa—even cramp, ringing in ears, pain

in head, etc. In drunkards, it should not be used, as it may produce wild delirium. Prof. Sée states it is also useful in hepatic complaints.

From the German and French. By WM. C. DABNEY, M. D.,
Charlottesville, Va.

Tobacco Smoking as a Cause of Diseases of the Ear and Deafness.—(*Annal. des Maladies de l'Oreille and Allg. Wiener Med. Zeitung*, No. 51, 1878.) The writer of this paper, whose name is not given in the journal from which we take the extract, calls attention to the fact, that up to the present time, the injurious influence of smoking on the organs of hearing has received but little attention; and so far as it has been observed, the deafness produced by tobacco was supposed to be caused by the injurious effect on the nervous system. While acknowledging that nervous deafness may be and is occasionally caused thus, he states that it is much oftener due to the irritating action of the tobacco on the mucous membrane of the posterior nares, the Eustachian tube, the pharynx and also in the pharyngeal muscles, and those of the soft palate.

He thinks that chewing is much less liable to cause these troubles than smoking, because the tobacco smoke comes in contact with a much larger surface than the saliva impregnated with tobacco. Cigarette smoking, he considers most injurious, because the smoke is so often blown through the nose, and at the same time enters the Eustachian tube. The tobacco smoke is laden with fine particles, which gain access to the middle ear and irritate its lining membrane. While this does not admit of actual demonstration, it is rendered highly probable by the fact that disturbances of taste and smell are unquestionably produced in this manner, and are frequently observed in habitual smokers. The long continuance of such an irritation gives rise to a chronic inflammation of the middle ear. The characteristic want of sensibility in the mucous membrane of the throat and nose of smokers who suffer from chronic angina is due to the benumbing influence of tobacco.

Linear Rectotomy.—A paper on this subject was read by M. Auger for M. Turgis, before the Société de Chirurgie, on the 11th of December last. We take the following report from *Le Progrès Médical*, of Dec. 14th:

The operation was practised for the removal of a piece of chocolate which had been inserted into the rectum. The

physician who was called immediately after the accident, tried in vain to remove the offending substance, but only succeeded in breaking it, which caused a considerable increase in the irritation of the mucous membrane. M. Turgis saw the patient on the fourth day, and deeming all "tentative" measures useless, he decided to operate at once.

He passed a curved trocar into the anal orifice, pushed it backwards through the tissues, and caused it to emerge near the point of the coccyx and a little to the left of it. He then introduced the linear éraseur, and practised the section without losing a single drop of blood. The foreign body was removed without the slightest difficulty. The after-treatment was simple, and the patient recovered promptly, in spite of the fact that he had lost much blood prior to the operation, that the rectal mucous membrane had been injured, and that there had been a wound of the prostate. M. Anger stated that this was the first time that this operation had been performed, though it had been suggested by Boyer at the commencement of this century. He stated that it would probably give excellent results in those cases where a foreign body was impacted in the rectum and could not be readily removed.

M. Verneuil, in commenting on the case, stated that the operation had been performed once before, in 1860, by Raffy, the sphincter in this case being cut with a bistoury. He considered the case of M. Turgis a most interesting one, as it brought into notice an operation almost harmless in itself, and which would render the greatest service; it should not be forgotten, he said, that the mortality from the introduction of foreign bodies into the rectum amounted to about 20 per cent.

Thoracentesis by Aspiration in Acute Pleurisy.—A brochure on this subject, by M. Dieulafoy, appeared a few months since, and was reviewed in the *Gazette Médicale de Strasbourg*, for December last. As M. Dieulafoy is the inventor of the method of aspiration, or rather as he brought it into notice of late years, a brief report of his views will be interesting.

The first question which he considers, is the indications for thoracentesis. Given an acute effusion into the pleural cavity, two cases may present themselves; in one the operation is urgently demanded; in the other, it is of questionable propriety. The urgency depends, according to Dieulafoy, on the amount of effusion; the dyspnœa, which is usually considered the most important symptom, he thinks may lead to false conclusions, and he cites several cases in which the

breathing was but little affected, in spite of an effusion of two or three litres of fluid in the pleural sack; and other cases in which sudden death occurred, and when it was thought the operation could be postponed without danger.

He thinks thoracentesis is indicated when, in a well formed adult, the effusion reaches the amount of 1800 or 2000 grammes. Auscultation is of little use, and percussion alone gives reliable information as to the quantity of fluid present. The displacement of organs, and especially of the heart, when the effusion is on the left side, furnishes most important information. When the impulse of the heart is felt to the right of the sternum, and the dullness reaches the spine of the scapula behind, the fluid will be present in the quantity mentioned previously (from 1800 to 2000 grammes), and thoracentesis is indicated, whether there be fever and dyspnoea or not.

In other cases the operation is of doubtful propriety. If, for example, the pleurisy is subsiding and the morbid fluid is being absorbed, the chest should only be punctured if the resorption is very slow and difficult.

M. Dieulafoy treats next of the accidents consecutive to thoracentesis, and he divides them into two classes. One class may be due to the operation itself; the other is caused by the diseased condition, leading to the accumulation of liquid, and has no connection with the operation. In the first group, he places pulmonary congestion and œdema, generally accompanied by albuminous expectoration. In the second, he places syncope, with or without cardiac lesions, and asphyxia, with or without thrombosis or embolism of the pulmonary vessels. Pulmonary œdema has been considered of late to be directly caused by the aspiration of the effused fluid; but M. Dieulafoy shows that this affection has frequently been observed as a result of those diseases (heart diseases, bronchitis and tuberculosis) which cause the pleural effusion, when aspiration had not been practised. He states, however, that when a very great quantity of fluid is withdrawn at once, pulmonary œdema may be caused, and that it is most usually the result of the combined action of the primary disease, and the excessive withdrawal of fluid at one sitting. Hence the rule to withdraw copious pleural effusions, especially when the pleurisy is of old standing and complicated *gradually*, and at different sittings.

As to the syncope, which has been urged as an objection to aspiration, it may occur independently of any such operation, and is generally due to the formation of pulmonary or

cardiac clots. M. Dieulafoy insists that thoracentesis is in no wise responsible for such accidents, and, on the contrary, it even tends to prevent them.

In answer to the question, does thoracentesis convert a *simple* into a *purulent* pleurisy? M. Dieulafoy gives a very positive answer in the negative. He states that the actual causes of purulent pleurisy are unknown, though certain pathological states (such as measles, scarlatina, the puerperal state and tuberculosis) predispose to it. If the pleural fluid contains red blood corpuscles in the proportion of 4,000 or 5,000 per cubic millimetre, it has been observed that a *purulent* pleurisy is liable to supervene. This is in accordance with the general law of purulent formations, but further than this we cannot go at present.

In the last place, the operative procedures themselves are considered. The eighth intercostal space, directly below the inferior angle of the shoulder blade, is the point selected by Dieulafoy.

Trousseau recommended the sixth or seventh intercostal space. The number two needle should be used, and not more than a thousand grammes should be withdrawn at one time.

M. Dieulafoy's conclusions are based on one hundred and fifty cases treated in this way.

A Case of Reflex Trouble of a Nature not heretofore Described.—The case reported by A. Erlenmeyer (*Deuts. Med. Wochenschr.*, 1878, No. 44 and 45) was one of reflex giddiness caused by a stricture of the urethra. In a person previously strong and healthy, and not predisposed to vaso-motor disturbances, a stiffness and weakness of the left arm appeared, then of the left leg, and then of the right arm; the right leg remained sound. This weakness and stiffness of the limbs were early associated with a very marked and unpleasant feeling of giddiness. This was evidently connected with a urethral stricture, for it was worse when the patient attempted to urinate. In a short time, also, the patient became melancholy, and showed a decided indisposition to hard work. Objectively there were observed catarrh of the stomach and bladder, difficulty of co-ordination, and absence of the reflex excitability of the tendon just below the patella. Treatment directed to a possible lesion of the central nervous system produced no effect, and the stricture was then dilated with bougies, causing entire relief from the giddiness and other distressing symptoms. [Cases not unlike this have been reported heretofore, but, so far as I know, none presenting the features which this does.—W. C. D.]

The Pathology of Cerebral Hæmorrhage.--In this paper, Dr. G. Eichler (*Deuts. Archiv. für Klin. Med.*, 1878, Band 22, Heft 1), the author considers the views advanced by Charcot and Boucharcl, that the great majority of cerebral hæmorrhages are due to the bursting of miliary aneurisms of the small arteries. He has investigated between three and four hundred cases, and comes to the following conclusions:

1. Primary, idiopathic cerebral hæmorrhage is due to the bursting of miliary aneurisms of the smaller arteries.

2. The miliary aneurisms are *genuine* aneurisms.

3. They are due to a chronic end-arteritis, which is identical with arterial sclerosis.

4. They are, like arterial sclerosis, peculiar to old age. [It is probable that they sometimes form in young persons as a result of syphilis.—W. C. D.]

5. The dissecting aneurisms are to be carefully distinguished from miliary aneurisms. They are hæmatomata of the vascular walls, and are not *causes*, but *results* of the hæmorrhage.

6. Simple widening of the capillaries is also to be carefully distinguished from miliary aneurisms.

7. The walls of the intra-cerebral arteries consist of three layers—internal, middle, and a muscular layer devised from the lymph tube.

[This paper is of considerable *practical* value; for if it be true that cerebral hæmorrhages are due to miliary aneurisms of the smaller vessels, we may reasonably expect favorable results from the use of ergot in such cases. It would not, of course, cure the diseased vessels, but it would cause such an amount of contraction that the hæmorrhage would be checked and life would be prolonged. Two cases treated by hypodermic injections of ergot, with favorable results, were reported by Dr. Forster, in the *Lancet*, during the early part of last year.—W. C. D.]

Tayuya Useless in Syphilis and Scrofula.—About a year ago, we translated the reports which were made about that time on this subject. Since then, the action and value of the medicine has been investigated more fully, and reports have been published by Pellizari, Alpago-Novello, and others. We take the following abstract from the *Rundschau*, for December, 1878.

At the syphilitic clinic, at Florence, Pellizari treated nine cases with tayuya with negative results. It seems to have, says Dr. P., in the various forms of syphilis, affections of the lymph glands and ulcers, about as much value as aromatic wine. As an anti-syphilitic, it is useless.

At the dermatological clinic of Prof. Michelacci, five adults suffering from scrofulous affections of the face, were treated for five months with tincture of *tayuya*, internally and externally. From fifteen to twenty drops were given internally each day, and a solution of from five to ten per cent. was used externally. No improvement whatever resulted, and the treatment was abandoned.

Zanetti reports three cases of recent syphilis in prostitutes, in which the medicine was tried faithfully for a month without benefit, and they were then promptly relieved by mercury. Other cases are reported, but in none was any benefit derived from the use of this agent.

Amputations by the Thermo-Cautery.—An interesting discussion on this subject took place at the meeting of the *Société de Chirurgie*, on the 5th of February last.

M. de Saint Germain read a paper on four amputations by the thermo-cautery, by M. Dubreuilh, of Montpellier. In the first case, the superficial tissues were divided in a case of gangrene, and it was then found necessary to cut deeper and deeper till amputation was performed. In the second case, the thigh was amputated. The operation lasted a long time, and a very large quantity of chloroform had to be given. In the third case, the operation was completed in fifteen minutes. The fourth case was one of amputation at the hip-joint. Only one of these cases recovered. One died from septicæmia brought on, it was supposed by M. Dubreuilh by the use of Esmarch's bandage.

M. Verneuil stated that he did not think the thermo-cautery would ever replace the bistoury in such operations, useful as it was in others, such as tracheotomy. He disapproved also of the ligation of the femoral as a preparatory measure in amputations, and said it was easy enough to take up the vessel during the operation.

M. Tillaux had twice employed the thermo-cautery for amputations, in consequence of the bloodlessness of his patients; but he thought the method objectionable on account of the slow healing of the wound afterwards.

M. Lefort said the great objection to the operation was the length of time it required to perform it. He said that after ablation of the breast in this way, he had seen "immediate reunion" of the wounded surfaces. He considered Esmarch's bandage dangerous in amputations, but very serviceable in resections.

MM. Farabeuf, Tillaux and Verneuil, all condemned the ligation of the femoral as a preparatory measure.

Proceedings of Societies.

Baltimore Academy of Medicine.

Pilocarpin Hypodermically for Bright's Disease.—Dr. D. J. McKew attracted the attention of the Academy to the hypodermic action of the muriate of pilocarpin. Having now in charge a young girl of 14 years of age with Bright's disease, the chief symptoms in this case being excessive general oedema, with the usual albuminous urine and granular tube casts, he had exhausted every means of reducing the oedema, and is now trying the effects of this alkaloid of jaborandi. He has so far made fourteen insertions of one-fifth grain each of the pilocarpin on successive days. The action of the drug seemed nearly immediate. Within four minutes after the injection, moisture commenced to show itself upon the surface of the head, rapidly followed by such profuse sweating over the entire body, that he referred to it as of a sheet of water which could be scraped off by drawing the hand over the surface. Simultaneously with this profuse sweating was the excessive discharge of saliva which ran out of the mouth in a little stream. The most distressing symptom occasioned was great sickness of stomach, with most persistent retching, and a sensation as if the mouth and throat was filled with a thick tenaceous mucus, which could not be dislodged. There was no change in the secretion of urine, which had always been small, only four ounces in twenty-four hours, and normally neither diarrhœa nor sweats. The temperature diminished from one to three degrees during the sweating stage; and the pulse was decidedly reduced in frequency. The urine contained one per cent. of urea, and the product of skin secretion one-half of one per cent. The profuse sweating stage continued for five hours after the subcutaneous introduction of the pilocarpin. The nausea subsided within a half hour from the administration. In each experiment profuse sweating was established within four minutes; and the nausea, with dry throat and profuse salivary discharge, was in full action in five minutes. There was much permanent depression from the drug towards the last administration, and a very decided diminution of the general anasarca. He was now giving digitalis and brandy for their tonic and stimulating effects.

Partial Suppression of Urine with Vicarious Diarrhœa.—Dr. T. Murdoch reported an interesting case of deficient urinifer-

ous secretion in a gentleman patient complaining of cystitis. He had had him under observation for several months. During that time, he had never passed more than four ounces of urine in the twenty-four hours, only a few drops at a time. The compensation in this case was secured by a natural diarrhoea of from ten to fourteen evacuations daily. There were no symptoms of Bright's disease in this case.

Albuminuric Retinitis.—Prof. J. J. Chisolm reported a case of albuminuric retinitis in a young lady, whose only manifest annoyance from a serious kidney disease, was the more or less sudden disturbance of vision. For this trouble she came under his treatment. The ophthalmic examination of the retina was unmistakably characteristic of Bright's disease, so that he was induced to examine the urine, when he found one-fifth in bulk of albumen deposited by heat, and also tube casts with the microscope. This lady, 19 years of age, had never had any discomfort whatsoever prior to the eye complication under treatment. Sight for the finest print has been restored; but still the peculiar glistening fatty degeneration at the central axis of vision is as marked as when first examined.

Removal of Calculus of an Inch Diameter from the Bladder by Bigelow's Method.—Prof. L. McL. Tiffany exhibited an interesting specimen of calculus which he had crushed and extracted by the method of Dr. Bigelow, of Boston. The patient, aged 49, after suffering many months, was brought to the city for treatment, and a stone discovered of over one inch diameter. After crushing the stone, the free use of water in the bladder through a large catheter washed out all small particles. The crushing of remaining fragments was then renewed and a second washing made until the water returned perfectly clear. A most careful examination could not detect any fragment, and gave a bladder free from detritus. The operation, which lasted thirty-eight minutes in its completion, was done under an anæsthetic. One hundred and twenty grains of dried fragments of calculus were removed. The bladder was a little irritable for three days, but was so far well by the fifth day that the patient returned home cured. The washing out catheter was of twenty-two calibre, which was readily introduced without splitting the meatus.

As Dr. Tiffany stated it, it is a great triumph for modern surgery, when a man with a stone over one inch diameter, from which he has suffered for eighteen months, can have it ground up and removed from the bladder in a half hour and without pain, and five days afterwards, resume his avocation, feeling perfectly well.

Salicylate of Soda for Rheumatism.—Dr. J. Stewart expressed the decided satisfaction which he had derived from the use of salicylate of soda in acute rheumatism, and mentioned a case of most painful typically rheumatic joints from which all pain and swelling had been removed by a few doses, one scruple each, of the above named salt.

Dr. McKew fully endorsed the views of Dr. Stewart. He had given the salicylate of soda with great freedom, and with nearly constant advantage. He administered it more freely generally than did the Professor. The dose with him was twenty grains, given at first every two hours; then at longer intervals, for four or five days, when the pain and swelling had usually altogether disappeared. The only objection he found to the salicylate of soda was the profuse sweating. Occasionally these large doses caused tinnitus aurium, and deafness as marked as from quinine. He had found this salt as useful in chronic forms of rheumatism as in the acute, and it had now become his favorite prescription for any annoying pain about the muscles or joints, whether of a rheumatic or neuralgic character.

Granular Cells, like those in Ovarian Cysts, found in Cystic Tumor of Neck.—Prof. Christopher Johnston exhibited two specimens of cystic fluid which he had drawn from the neck of a little girl four years of age. These tumors—very elastic and giving undoubted evidence of fluid contents—were located on the left side of the neck, extending from immediately under the ear downwards to the shoulder. Two were very conspicuous, and seemed well isolated from each other. The upper was the larger one, and was the size of an orange. When tapped, the lower one proved equally capacious, extending deeply towards the transverse processes of the vertebræ, and among the deep layers of the neck muscles. The capacity of each was about six ounces. The fluid from these two sacs differed in color; one was of a light straw color; the other of a reddish brown. Another peculiarity was that the light specimen remained perfectly fluid in the vial in which the specimen had been poured; while the darker liquid had undergone so firm a coagulation as to exhibit the consistency of jelly. A microscopic examination of these two fluids revealed a peculiar contents. In the darker fluid, no blood cells could be found, but a large number of granular cells were detected, identical with those said to be peculiar to ovarian cysts. In the light liquid, there were no such neoplastic formations, although some small round cells of unknown pathological value were discovered. After the as-

piration of these cysts, the extremity of the canula came in contact with irregular masses in the cavities—one of which being larger than the rest, was perforated by the trocar, and from it fluid was also drawn away. It is proposed in the future to lay open these sacs when the true character and condition of the lining walls can with certainty be determined.

Prof. Johnston being a microscopist of extended reputation, the fact that he has found in a multiplied cyst of the neck a coagulating fluid which contains granular cells heretofore considered pathognomonic of ovarian fluid is an item of great value. The patient was aspirated under the anæsthetic influence of chloroform.

Chloroform Preferred as Anæsthetic.—Prof. J. J. Chisolm was glad to find that Dr. Johnston has used chloroform in lieu of ether, for which he had always given the preference; and assured him that a more ultimate acquaintance with chloroform would give him an aid of the greatest comfort in his surgical work. Dr. Chisolm continued to administer chloroform every day, and had even to-day given it four times to complete anæsthesia. As one of the most outspoken advocates for chloroform against all other anæsthetics, he daily saw the necessity of having strong faith in its efficacy and safety, and fixed rules for its administration. A few days since, the necessity for this was favorably experienced in operating upon a case of iritis in a woman 45 years of age. She had been suffering intensely from closure of the pupil and glaucomatous pressure. For days she had taken no food; was constantly nauseated; and no sleep in spite of large doses of opium. An operation alone could give her relief. A large dose of whiskey was taken, and chloroform administered to complete anæsthesia. The operation had commenced, and the anterior chamber of the eye had been entered with the knife when respiration ceased. At once the patient was hung up by the feet and held in this position with head down for one and a half minutes, when a feeble motion in the chest became evident, and in five minutes respiration was perfectly re established. As the patient seemed perfectly relaxed, it was thought that the operation might progress. The eye was touched, when a flint of the head indicated extreme reflective irritability, and an impossibility of continuing the operation without further anæsthesia. Chloroform was again administered to saturation, and the operation resumed. The knife had now transfixed the chamber, when again the respiration stopped, and a very death-like appearance ensued—the heart, however, still beating feebly.

Again was she suspended by the feet, and the restoration of the respiratory function most anxiously watched for. After suspension for a little over a minute, feeble chest motions were resumed. When respiration had become fully re-established, and with it the irritability of the surface, so that the operation could not be performed, chloroform was for the third time administered, and now the operation of iridectomy was satisfactorily completed. In this case the administration of a large dose of whiskey, a preparation never to be omitted in the chloroforming of adults, did away with the necessity for hypodermic injections of alcohol or ether; and an abiding faith in the value of suspending the patient by the feet when any flagging of the vital energies ensues under chloroform, made its administration safe, in a case well calculated to frighten the timid.

Baltimore Medical and Surgical Society,

(T. J. WARD, M. D., Recording Secretary.)

Jan. 9. **A Hair-Pin Removed from Bladder** of a female, 19 years of age, was exhibited by Dr. Erich.

Jan. 23. **Potassium Bromide for Diabetes.** Dr. Grove spoke of a case of diabetes mellitus in a child six years old, who, before treatment was begun, passed from one to one and a half gallons of urine a day. He calculated that, in the course of about six weeks, the child had passed about ten pounds of diabetic sugar. The patient was put upon bromide of potassium, and now the daily quantity of urine voided is reduced to about a quart.

Jan. 30. **Cauliflower Tumor of Vulva Removed by Galvano-Cautery.** Dr. Ephraim Cutter, of Boston, by invitation, reported the following case:

On November 12, 1878, he first saw Mrs. Iverson, of Cambridge, Mass., age 75 years. She said she had a "a tumor in her side," and was perfectly well in other respects. She was of small figure, but was lively and active. She had noticed the tumor for about two months. She complained of much pain shooting down the right thigh, and of inability to sit down comfortably. On examination, the tumor was found to spring from the vaginal surface of the right labia; cauliflower in shape, red, vascular and ulcerated, mobile, and not penetrating the deeper tissues. It was pedunculated and measured three inches over its broadest surface. It was also painful. Diagnosed cancer. The Doctor determined on the use of the galvano-caustic, in the hope that the heat might

destroy the local diseased action as it does in the ordinary recurrent vascular tumors or caruncles which sometimes develop at the mouth of the female urethra. At all events, this treatment might retard the progress of the disease for awhile.

Nov. 16. Operation performed. Present, the veteran electro-therapeutist, Dr. A. C. Garratt, and Dr. L. F. Warner, of Boston; Drs. M. G. Wheeler and — Weeks, of Chelsea; H. O. Marey and E. G. Meader, of Cambridge, and E. H. Norris, of East Cambridge. The patient was etherized, when the tumor was carefully examined by all the physicians named, who concurred in the diagnosis, and in the advisability of the operation proposed. The tumor was surrounded by the chain of a common *écraseur*, so as to gather the pedicle into one compact mass, but not so as to cut the mucous membrane. The wire of Dr. Cutter's galvano-caustic holder was placed around the pedicles and gently drawn in contact with it. The current from Dr. Cutter's battery, No. 1, arranged with three cells, was completed, and the wire became incandescent. Soon, the wire was burnt in two, when the ends were twisted and replaced and the current re-established. Soon the pedicle was burnt off; the *écraseur* removed, and the eschar was examined by all, and found to be as smooth as the patient's cheek. There was no hard, indurated line over the black ring of the first burning, or rather, of the periphery of the eschar, which was itself white. A pledget of absorbent cotton was placed in contact with the parts, and the operation completed. Not a drop of blood was lost save that which was squeezed out from the vascular substance by the *écraseur*.

The subsequent history has been one that involved nothing but satisfaction. The pain was abolished, except at one spot where the wire burnt the skin. Of course, the future is yet to come; but as there is a good appetite, and as cancer is now acknowledged to be more of a local than a systemic disease, and also a disease of nutrition, there is some hope of arrest from the peculiar action of the galvano-caustic.

Remarks.—The points to be noted are—1st. The dependence upon the *écraseur* to hold the pedicle. 2d. The slow burning with a No. 25 (U. S. gauge) platinum wire. This allowed of section with the loss of the least amount of tissues. 3d. The apparatus of the writer, which Codman & Shurtleff, Boston, furnish at half the price of an ordinary galvano-caustic battery.

Book Notices, &c.

Publishers and Authors having complimentary copies of their publications for distribution, are invited to contribute such as they can spare to the library of the Richmond Academy of Medicine, where they will be brought to the attention of a large body of influential medical men. Dr. E. T. Robinson, Richmond, Va., Librarian, etc.

The Principles and Practice of Surgery. By JOHN ASHURST, JR., M. D., Professor of Clinical Surgery in the University of Penn., etc. Second Edition. Enlarged and thoroughly revised. 542 Illustrations. Philadelphia: H. C. Lea. 1878. 8vo. Pp. 1040. Leather. Price \$7. (For sale by West, Johnston & Co., Richmond.)

The enlarged experience of the author, and his familiarity with the progress of surgery in all parts of the world, have enabled him to present in this new edition of his excellent work a volume that contains everything that is of practical value, and having any relation to the science and art of surgery of the present day. While it contains information from every source and country, we claim that this is essentially an American work, and can safely recommend it to our countrymen as a valuable addition to our surgical literature, but especially as a book of reference for those whose time and opportunities are not such as to allow access to the more elaborate systems of surgery.

The illustrations, original and selected, are well executed, and the mechanical part of the work is up to the high standard of the well known publishing house that issues the volume.
C.

Diphtheria: Its Nature and Treatment, Varieties and Local Expressions. By MORRELL MACKENZIE, M. D., London, Senior Physician to the Hospital for Diseases of the Throat and Chest, etc. Philadelphia: Lindsay & Blakiston. 1879. 12mo. Pp. 104. Price, 75 cents.

This is an entertaining and useful monograph. It is written chiefly from a clinical standpoint, and its recommendations as to treatment seem founded on carefully observed and critically examined facts. While the author makes favorable mention of alcohol as an important therapeutical agent in this disease, we think, in view of recent lights, that he should have urged its more liberal use *from the commencement* of the attack. Prof. E. N. Chapman, of Brooklyn, regards alcohol as much of a specific for diphtheria as quinia for intermittent fever; and no less an authority than Dr. J. Lewis

Smith, of New York, believes that, if given early and frequently in grave cases, it "is as nearly a specific as any other agent." "But" (quoting Dr. Smith) "to be instrumental in saving life in malignant cases, it must be given boldly from the start." The writer of this notice has recently been most favorably impressed by observing the effect of the alcoholic treatment as suggested by Dr. Chapman—whiskey being given *from the start* in large and frequently repeated doses. Dr. Mackenzie's book is most excellent in the description of symptoms, and ample in details as to treatment, unless we except that, in our opinion, he does not sufficiently bring out the value of alcohol.

Health Primers. New York: D. Appleton & Co. 1879. 16mo.

"Several eminent medical and scientific men of London have combined to prepare a series of Health Primers"—brief, simple and elementary. The series will form a cheap and compendious popular library of health manuals; and as each primer will be written by a gentleman specially competent to treat his subject, we cheerfully recommend the series.

Primer I treats of "Exercise and Training," by C. H. Ralfe, M. D., and is full of important lessons which should be popularized.

Primer II is on "Alcohol—its Use and Abuse," by W. S. Greenfield, M. D., and its suggestions should be impressed upon communities. It is a *very* sensible paper.

Primer III is on "The House and its Surroundings." Although relating chiefly to English habits and modes of living, this Primer contains important suggestions for Americans as well.

Primer IV has for its title, "Premature Death: its Promotion or Prevention," and is interesting and instructive alike to the professional as well as general reader.

Modern Medical Therapeutics; A Compendium of Recent Formulæ and Specific Therapeutic Directions. By GEORGE H. NAPHEYS, A. M., M. D. Sixth Edition, Enlarged and Revised. Philadelphia: D. G. Brinton, 1879. Cloth. 8vo. Pp. 607. Price \$4.

Modern Surgical Therapeutics; A Compendium of Current Formulæ, Approved Dressings and Specific Methods for the Treatment of Surgical Diseases and Injuries. By GEO. H. NAPHEYS, A. M., M. D. Sixth Edition, Revised to the Most Recent Date. Philadelphia: D. G. Brinton, 1879. Cloth. 8vo. Pp. 605. Price \$4.

These books have been remarkably popular, but not more so than we predicted in our notice of the fifth editions. Their

merits make them useful to every practitioner, while the price is so moderate as to allow most doctors to provide themselves with copies. They are, in short, ready reference books, so that the physician or surgeon has but to diagnose his case, and he may then turn to the one or the other of these volumes, and get at a glance, an epitome of all the leading suggestions as to treatment—including suggestions of the most recent date, whether published in book or journal.

The present editions of the two works named are thorough revisions of those immediately preceding them; and many diseases and remedies are given which were not included in former editions.

We are glad Dr. Brinton contemplates the early issue of a similar work on diseases of women.

An Atlas of Human Anatomy, Illustrating most of the Ordinary Dissections and Many not Usually Practised by the Student. Accompanied by an Explanatory Text. By RICKMAN JOHN GODLEE, M. S., F. R. C. S., Senior Demonstrator of Anatomy in University College, etc. Philadelphia: Lindsay & Blakiston. 1878. Price \$2.50.

This is Part II of the magnificent work, being published in monthly Parts by the well known publishers named, that we have before had occasion to commend without reserve. The plates are most excellent, and of the greatest value to every practitioner. However extravagant our praise of Part I may have seemed to some, we have said nothing that we wish to modify or qualify. The remarks then made are as applicable to this Part II.

Atlas of Skin Diseases. By LOUIS A. DUHRING, M. D., Professor of Skin Diseases in the Hospital of the University of Pennsylvania, etc. Part V. *Scabies, Herpes Zoster, Tinea Sycois, Eczema Vesiculosum.* Philadelphia: J. B. Lippincott & Co. 1879. Royal octavo. Price, \$2.50 per Part. (For sale by Messrs. West, Johnston & Co., Richmond, Va.)

Each Part as issued from the elegant press of Messrs. Lippincott & Co., seems an improvement upon its predecessor, if such were possible. The plates illustrative of the diseases named in the title are unequalled by anything that we have seen of the kind. The text is admirable, and the whole takes the place of a first-rate clinical lecture.

Editorial.

Wanted.—Parties who will at once return to this office, in good condition, copies of the *November* or *December* No. of this journal will be rewarded by either 40 cents cash for each copy, or two months' subscription for each.

Dr. Ephraim Cutter, of Boston, projected Beale's and Salisbury's (chiefly) hereditary taints before the Richmond Academy of Medicine at a special meeting March 3d, 1879. The results of work done with the best modern instruments of precision were shown so that all could see for themselves. Micro-photographs of syphilitic and consumptive blood, taken with Tolles' $\frac{1}{8}$, $\frac{1}{10}$, $\frac{1}{16}$, $\frac{1}{32}$, $\frac{1}{64}$ inch objectives, occupied undivided attention for about two hours. Yeast and algæ were demonstrated as examples of nocent and innocent parasitic vegetation. The spores of a yeast found in the blood of consumptives, even one year before organic lung disease, were shown and approved as examples of the Salisbury doctrine, which is, that a yeast in the blood is the cause of tuberculosis. As evidence, bread raised with the yeast in the fecal diarrhoeal dejections of the third stage (after Salisbury), was shown. It was also stated that Dr. Salisbury had killed 104 animals by consumption, and artificially induced it by feeding with food saturated with yeast; and, further, that, by starving out the yeast from the blood, both Drs. Salisbury and Cutter had, in a large number of cases (over 1,000), convinced themselves that this is the nearest approach to the real nature of tuberculosis they knew of. A combined work is ready for the press by subscription (\$5). A physical demonstration was shown of the power of the Salisbury plan to clear the blood and reduce the enlarged white blood corpuscles.

Dr. W. R. Weisiger, of Manchester, ably assisted Dr. Cutter in his demonstrations. Dr. Cutter tells us he is an honor to our State. The progress in micrology made by a "Virginia country doctor" in active practice and middle life, is very encouraging to those who would solace advancing years with the microscope, and creditable to Dr. Weisiger.

The clinical microscope of the Boston Optical Works was practically demonstrated to the Academy after the lecture. Our readers are promised a primer of this instrument by Dr. Cutter in a short time. The fair hearing which is due to an honest worker in the profession, we bespeak for this sub-

ject, as, though we are not experts, we have seen enough to convince us of its great practical value, provided the experience related is confirmed by that of others.

Dr. J. Marion Sims will return to New York early in September of this year, to remain and re-enter upon active professional work in his special line. By that time, he will have finished his book on Gynæcology, which so many of the profession are reserving their means to purchase upon issue, as everybody knows it will be *the* authority on Diseases of Women. We have made the statement of Dr. Sims' return from Paris to America gratuitously, and from information derived solely from a personal letter to the Editor: but we know so many general practitioners have constantly on hand patients, regarding whom they would desire to consult so eminent an authority, that we feel that it is for the "common good" that this announcement should be made.

Opium-Eating.—At the regular quarterly meeting of the Michigan State Board of Health, October 8th, 1878, the secretary, Dr. Henry B. Baker, of Lansing, presented a communication from Dr. O. Marchall of North Lansing relative to opium-eating and the opium habit, which included a summary of replies by 96 prominent physicians in Michigan to a circular of inquiry as to the number of opium and morphine-eaters of both sexes in their localities. There were reported from these places, mostly villages and smaller cities, 1,313 habitual eaters of the drug. It also included a statement from the U. S. treasury department, showing that there have been imported during the 27 years from 1850 to 1877, 5,299,774 lbs. of opium, valued at \$26,142,085, besides 22,565 oz. of morphine, valued at \$73,433 imported during the 17 years from 1861 to 1877; also, showing that the imports for the ten years ending with 1877 exceed by 2,057,080 lbs., or nearly 200 per cent., the imports for the ten years ending with 1859. In addition it is believed that there has been at least 10 per cent. of the amount above stated smuggled into the country. The estimates for Michigan based on these replies and the statements of a wholesale drug-store in Detroit show the consumption of opium to be very large.

The St. Louis Courier of Medicine is a magnificent journal of 120 pages monthly, begun January, 1879, by the Medical Journal Association of Missouri. Three dollars a year. The Association is composed of 42 stockholders, who are practi-

tioners of medicine. Editor, Dr. A. J. Steele; Associate Editor, Dr. W. A. Hardaway; Dr. E. W. Schauffler, Corresponding Editor, with about fifty "Reporters" and "Collaborators." The January, February and March numbers, 1879, have been issued.

The Sphygmograph is an instrument designed to trace on paper or other surface the pulse waves. It was invented some thirty years ago by Vierordt as an aid to the study of the physiology of the circulation. About 1864 or 1865, Dr. E. J. Marcy, of Paris, devised a sphygmograph for clinical purposes, and from that time its application to the study of diseases has been attracting professional notice. Burdon-Sanderson, Anstie, Balthazar Foster, Galabin and others in Europe more particularly have done much to popularize it there. But the original instrument of Marcy, and its subsequent modifications, were practically unwieldy; and hence, except in hospital practice, or very rare cases in private practice, the instrument did not get into the hands of the general practitioner. Recently, however, Pond's Sphygmograph Company, of Rutland, Vermont, have been manufacturing an instrument which will much favor the popularization of the subject. Their sphygmograph is readily portable, easy of application in almost any position of the patient, and accurate in its tracings. We have for some months been using this sphygmograph, and as an aid to diagnosis, we rank it next to the thermometer in practical importance. Although most of the recent text-books on practice devote special chapters to this instrument and its uses, it is remarkable to notice how few doctors of the rank and file have even ever seen one. Impressed as we have been, especially recently, as to the decided clinical value of the sphygmograph, and knowing that it is not in *general* use—especially among Southern physicians—we have felt that this prominent reminder might be of real value to our readers. At present it is used chiefly in the larger medical centres of the country, and mostly by those of eminence. It should be considered as well a part of the ordinary equipment of the general physician.

Quinquinia consists of *all* the alkaloids of cinchona bark as naturally combined—quinia constituting at least 15 per cent. of the whole preparation. We have already committed ourselves to the opinion, based upon practice and observation, that a *combination* of the alkaloids of the bark gives more certain beneficial results than quinia alone. The dose being

about the same as that of quinia, and the price only about one-fourth of that agent, and the effect being, for anything, more pronounced, the profession will be grateful to Messrs. Chas. T. White & Co., of New York, who introduce it, as seen by their special advertisement inserted between the leaves of the reading matter of this issue.

The American Medical Association will convene in Atlanta, Ga., Tuesday, May 6th, 1879, at 11 A. M. Every member who proposes to present a paper should forward it, or a title indicative of its contents and its length, to the Chairman of the Committee of Arrangements (Dr. J. P. Logan, of Atlanta) at least one month before the annual meeting. Then the Committee determines the order of presentation, and announce the same in the form of a programme for the use of members.

For the benefit of all interested, we reprint from the Secretary's circular, just issued, proposed changes in the Plan of Organization to be acted upon.

Offered by Dr. J. M. Keller, Ark. Plan of Organization, Art. IV, Sect. 1.—“In future the Committee on Nominations shall present the name of no person for appointment or election to office or position save on the Committees on Necrology and Climatology, unless the party nominated be in attendance on the Association at the time.”

Offered by H. O. Hitchcock, Mich. Plan of Organization, Art IV, Sect. 1.—“The several State, Army and Navy delegations, including delegates and permanent members, shall, on the first day of the Annual Meeting of this Association, at a meeting publicly called for that purpose, nominate candidates for the several offices of President, Vice Presidents, and Chairmen for the several Sections, and shall choose one of their number to act on the Nominating Committee of the Association, with power to cast as many votes in that Nominating Committee as there are members of the delegation of which he is a member. Candidates for the several offices above named to be reported to the Association shall be selected from the names reported to the Committee of the several State Delegations.”

Offered by Dr. A. N. Bell, N. Y. By-Laws: II. Sections. “Consolidate Section 4, On Medical Jurisprudence and Psychology, and Section 5, On State Medicine and Public Hygiene, and call it Section 4.”

Offered by Dr. J. J. Caldwell, Md. By-Laws: II. Sections. “Form an additional Section, to be known as the Section on Neurology and Electrolgy.”

Offered by Dr. T. Clay Maddux, Md. By-Laws: II. Sections. "Form an additional Section on Diseases of the Genito-Urinary Organs, including Syphilis and Dermatology."

Offered by N. S. Davis, as Chairman of a Committee. "Code of Ethics." Art. I, paragraph I, add, 'And hence it is considered derogatory to the interests of the public and the honor of the profession, for any physician or teacher to aid, in any way, the medical teaching or graduation of persons knowing them to be supporters and intended practitioners of some irregular and exclusive system of medicine.'

Had we grounded hope of influencing the law making the powers of the Association, we would cheerfully sacrifice the time and labor necessary to properly present reasons why the proposed "additions" to the so-called "Code of Ethics" should not be adopted. The "Code" is bad enough as it is, and of course is constantly a source of strife. It has become a something which provokes the ridicule of intelligent men that we cannot conscientiously resent or resist. Will not some as warm friends of the profession who are mightier than we, display the degree of courage manifested by Dr. Marion Sims in his address a few years ago, and manifest the amount of self-sacrifice required at this particular juncture, to expose and oppose some of the popular evils contained in the so-called "Code"? Better do away with any written code than to have such an one as exists, with its outcropping ordinances, several of which are unjust, oppressive, illiberal and short-sighted. Our remarks would accomplish good if we can lead "regular" doctors, who are friends of the Association in other respects as we are, simply to read attentively the "Code" and the Ordinances.

Meetings of State Medical Societies, 1879—

Kentucky State Medical Society, in Danville, Tuesday, May 13th, 1879. The monument erected to Dr. Ephraim McDowell will be unveiled during the session. Dr. C. H. Todd, Owensboro, *President*; Dr. J. H. Letcher, Henderson, *Recording Secretary*.

Florida Medical Association, in Jacksonville, Tuesday, April 15, 1879. Dr. Robert D. Murray, Key West, *President*; Dr. Joseph Y. Porter, Key West, *Secretary*.

Mississippi State Medical Association, in Aberdeen, Wednesday, April 2, 1879. Dr. B. F. Kittrell, Black Hawk, *President*; Dr. Wirt Johnston, Jackson, *Recording Secretary*.

Medical Society of the State of Tennessee, in Nashville, Wed-

- nesday, April 2, 1879. Dr. R. F. Evans, Shelbyville, *President*; Dr. J. Berrien Lindsley, Nashville, *Permanent Secretary*.
- Medical Association of Georgia*, in Rome, Wednesday, April 16, 1879. Dr. John Thad. Johnson, Atlanta, *President*; Dr. James B. Baird, Atlanta, *Secretary*.
- Colorado Medical Society*, in Colorado Springs, Tuesday, May 13, 1879. Dr. A. Stedman, Denver, *President*; Dr. C. C. Lathrop, Denver, *Permanent Secretary*.
- State Medical Society of Arkansas*, in Little Rock, Wednesday, May 7, 1879. Dr. A. A. Horner, Helena, *President*; Dr. R. G. Jennings, Little Rock, *Secretary*.
- Ohio State Medical Society*, in Dayton, June 3, 1879. Dr. B. B. Leonard, West Liberty, *President*; Dr. J. F. Baldwin, Columbus, *Secretary*.
- Medical Society of the State of North Carolina*, in Greensborough, Tuesday, May 20, 1879. Dr. Charles Duffy, Jr., Newbern, *President*; Dr. L. J. Picot, Littleton, *Secretary*.
- Medical Society of the State of West Virginia*, in Martinsburg, June 4, 1879. Dr. Wesley H. Sharp, Volcano, *President*; Dr. M. F. Hullihen, Wheeling, *Secretary*.
- Medical Society of the State of Pennsylvania*, at Chester, May 21, 1879. Dr. James L. Steward, Erie, *President*; Dr. Wm. B. Atkinson, Philadelphia, *Secretary*.
- Connecticut Medical Society*, in Hartford, May 28, 1879. Dr. Charles M. Carleton, Norwich, *President*; Dr. C. W. Chamberlain, Hartford, *Secretary*.
- Massachusetts Medical Society*, in Boston, June 11, 1879. Dr. George H. Lyman, Boston, *President*; Dr. Francis W. Goss, Roxbury, *Recording Secretary*.
- Medical Association of State of Alabama*, in Selma, Tuesday, April 8, 1879. Dr. R. D. Webb, Livingston, *President*; Dr. Thos. A. Means, Montgomery, *Secretary*.
- South Carolina Medical Association*, in Charleston, Tuesday, April 8, 1879. Dr. H. D. Fraser, Charleston, *Secretary*.
- Louisiana State Medical Association*, in New Orleans, Wednesday, April 9, 1879. Dr. J. C. Egan, Caddo, *President*; Dr. Thomas Layton, New Orleans, *Recording Secretary*.

Dr. J. Marion Sims, incidentally, in a personal letter to the editor just received, states that he will positively return to New York next September to resume his practice there. By that time, also, his book on Gynæcology (which the profession over the world is so anxious to see) will be ready for the press.

Dr. Crawford W. Long—the Discoverer of Modern Surgical Anæsthesia.—At a meeting of the Medical Association of Athens, Ga., held February 24, 1879, it was resolved to request the Georgia State Medical Association, at its approaching session, to take steps to definitely determine the right of Dr. Long's claim to priority in the discovery of modern surgical anæsthesia; and also to request the State Association to bring the matter before the American Medical Association during its early session in Atlanta, in order that, "through this national convention of medical men, Dr. Long's claim may be established throughout the civilized world."

Nothing has occurred since we first read Dr. Sims' convincing paper on this subject, to change our conviction that Dr. Long was the real discoverer of the anæsthetic use of ether.

Inloes' Emulsion of Cod Liver Oil and Hypophosphites combined with Eucalyptus Globulus is an elegant preparation. Messrs. A. J. Inloes & Co., Binghampton, N. Y., supplied us with a quantity which we have tested with benefit to the patients, and specially great satisfaction to us in modifying the cough of consumption, while it exerted the established influence of cod-liver oil in such cases. The combination with eucalyptus globulus need only be mentioned for its virtue to be appreciated.

Medicinal Plasters.—Messrs. Seabury & Johnson, of New York, discovered that India rubber is preservative of medicinal principles, and originated the use of this base for all medicinal plasters. Other advantages possessed by their plasters are perfect pliability at all seasons, and adhesion without heat or moisture—a matter of great convenience. A cold process is used in preparing drugs for making the plasters, which avoids volatilization. We have tested many of their plasters with perfect satisfaction. Their isinglass plaster is excellent. A small percentage of salicylic acid is incorporated in it, as also in their surgeons' rubber adhesive plaster—the benefit of which will be recognized on mention.

Gordon's March is the title of a new and attractive piece of music, arranged for the piano, composed by Prof. Henry Schveller, of Dalton, Ga., and published by Messrs. Ludden & Bates, Savannah, Ga. Price 40 cents. The sheets are nicely issued. The title page has a life-like lithograph of the gallant Gen. John B. Gordon, to whom the piece is dedicated.

Obituary Record.

Dr. Charles H. Smith.—At a meeting of the Richmond Academy of Medicine and the profession of the city of Richmond, March 24, 1879, the following preamble and resolutions were unanimously adopted, relative to the death of Smith, which occurred while he was visiting Washington, D. C., March 23rd:

Whereas, it has pleased Almighty God, in his wise providence, to remove from us by death Charles H. Smith, M. D., an honored and beloved member of the Richmond Academy of Medicine; therefore,

Resolved by the Richmond Academy of Medicine and Medical Profession of the city of Richmond assembled,

That we keenly feel this sudden and unexpected bereavement, and receive it as an admonition to be ready for the inevitable event which awaits us all.

Resolved, That in the death of Dr. Smith the profession has lost one of its brightest ornaments, and the city of Richmond one of its most worthy and valuable citizens.

Resolved, That the Academy of Medicine will cherish his memory as a gentleman of the highest accomplishments, combined with integrity, honor, urbanity, culture and refinement.

Resolved, That we tender to his family our condolence in this their sore bereavement.

Resolved, That as a body we will attend the funeral of Dr. Smith; and hereby tender all the offices of friendship within the compass of our ability, on this sad and mournful occasion.

Resolved, That a copy of these resolutions be spread upon the records of the Academy, sent to the family of Dr. Smith, published in our city papers and medical press of the State.

Drs. Landon B. Edwards, James B. McCaw, C. W. P. Brock, George Ross, on behalf of the Richmond Academy of Medicine.

Drs. S. P. Moore, R. A. Lewis, on part of the Medical Profession of Richmond.

Dr. McCaw, in seconding the resolutions, paid a merited tribute to the memory of Dr. Smith.

Remarks were also made by Drs. Archibald Taylor, J. G. Cabell, and others.

M. L. James, President; Charles S. Brittan, Secretary.

VIRGINIA MEDICAL MONTHLY.

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RICHMOND, MAY, 1879.

Original Communications.

ART. I.—Treatment of Spinal Curvature by Silicate of Soda Jacket. By E. H. COOVER, M. D., Harrisburg, Pa.

CASE VII*.—July 23d, 1878, Miss —, æt. 25, white, teacher, height 62 inches, fair skin, brown hair and eyes. Related the following history: She has suffered from her back for 8 years, and for a greater part of the time has worn a mechanical support. The last one was made at the Institute for Cripples, Broad and Arch streets, Philadelphia, where she had been treated through the year previous to

July 4, 1878. It weighed four and one-half pounds. Her menses had not appeared for one or two periods, while a troublesome cough annoyed her. For relief, she slept upon her face. From all these causes of physical distress, the School-Directors concluded to dismiss her.

Examination revealed bulging of the right scapula, with dropping and recedence of the shoulder, and the left shoulder was pushed forward; also the breast. When seated, she constantly changed her position, because of pain. Figure 1, copied from



*Cases, before this, illustrating the use of the silicate of soda jacket, were published in the *Med. and Surg. Reporter*, Philadelphia, April 13, 1878.

a photograph, shows the amount of curvature before I began treatment. A jacket of muslin, wet with silicate of soda (sp. gr. 1.2755, temp. 62°F.), was applied while she was suspended. This gave the support so much needed; she became free from pains, walked easily, and resumed her position as teacher so efficiently, that the School Board selected her principal of the building. She preferred, however, to retain her own school, because it demanded less activity. Her habit became regular, the cough disappeared, and she slept comfortably upon her back. She recovered so much that it was requisite to remove a wedge-shaped piece from the part of the jacket resting upon the right scapula, bringing the edges together. Her deformity was much corrected; she also repeatedly used the extension apparatus.

On the 26th December, 1878, with the assistance of Hugh Hamilton, M. D., another jacket was placed on the patient made with silicate of soda. At present, she feels comfortable, performs her duties, and enjoys her pleasures unrestrained. Her height is sixty-three inches; weight and color improved. Unless one was quite observant, her disease would not be suspected. The improvement of the curvature is shown in Figure 2.

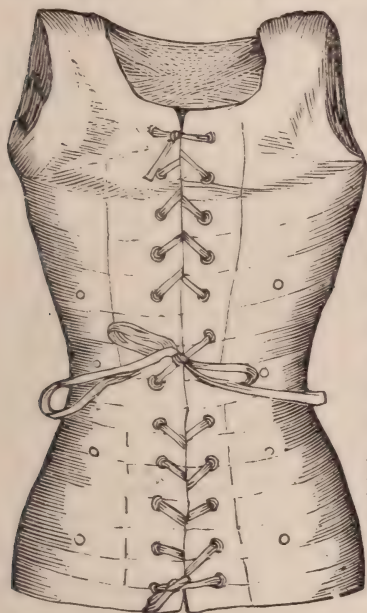


Having received a number of communications concerning a more detailed statement of my use of silicate of soda, I wish to state the method to be as follows: I procure between three or four yards of *unbleached* muslin; from it cut two patterns, of a bodice of two backs and fronts (like a tailor cuts a coat), long enough to extend to a little below the pubes and hip joint—the person being clothed in a skin-fitting shirt, seated upon a stool higher than an ordinary chair. The back pieces of one of the jackets are laid on, wetted with a solution of silicate of soda—care being taken that the edges of the back meet at the top and bottom. They are so cut as not to meet along their entire length—thus leaving an elliptical opening, so shaped as to fit the normal curves of the back. The fronts are then put on; the

soda solution causes these pieces to adhere sufficiently. Braces of tin, cut to the depth of an inch or more, are placed along the edges long enough to reach from the axillæ to over the crests of the ilii, and about three and a half inches wide at top, and five at the bottom, so that the double curve of the body may be followed. They are all fastened to the bodice by a covering of muslin coated with soda solution. Other braces, an inch wide, and extending from the junction of the

fourth rib with the sternum to near the symphysis pubes, are secured in like manner.

The patient is now suspended upon the admirable apparatus of Sayre, and a three-and-a-half inch bandage, passed about the trunk from above downward, being coated, as it advances, with silicate of soda. The second bodice is applied like the first one was, without braces. The individual is then let down, placed on his back, remaining there for four or five hours. When the jacket is removed, it is in a semi-hard condition.



When taking the jacket off, the patient is seated upon a stool as before, the edges are trimmed off around the pelvis, a sufficient amount removed from the arm-pits and from the breast as desired, while the back demands the discretion of the physician; it is then opened in front from below upwards. Should there be any lap, it should be cut off, except half an inch. The jacket being removed, the edges of the inner bodice are raised along the back, and the elliptical opening spoken of cut out, the edges brought together with pieces of tin passed from within outward through slits made with a one-quarter inch chisel; a strip of tin the length of the jacket, one or two inches wide, is put inside upon this seam, neatly covered with

a strip of muslin wet with the soda solution. Dry by a warm stove long enough to harden; keep the shape as much as possible. After it has hardened, pound over a rounding block, line with strips of muslin, and bind the edges with it, cut bias, both wet with soda solution. Punch holes from within outward at regular intervals for exhalations, and set eyelets for lacing; coat the whole with soda solution, and dry carefully.

Place the jacket upon the suspended patient; put him on his back for a little while; he rises relieved of his pain; soon becomes accustomed to his new garment; resumes his duties, and improves accordingly.

The silicate of soda is very inexpensive; the quantity used is from two to three pints of sp. gr. 1,2755 in summer, and a little higher in winter. The cost is only thirty-five cents; the muslin but five cents a yard; the time of application upon the patient thirty to forty minutes.

Abundant porosity is obtained by the holes punched; and its easy removal permits the body to be cleansed when necessary, say every two or three weeks. The weight is from two and three-quarters to three and one-quarter pounds for adults; for children, the weight is much less, varying with the age.

It is more troublesome than plaster of Paris to finish, but its durability compensates for all labor expended upon it. In my Cases I and III,* the patients traveled hundreds of miles, when, previous to treatment, they could not leave their rooms with ease.

ART. II.—**Retention of Catheter after the Operation for Vesico-Vaginal Fistula and Ruptured Perineum, etc.** By HUGH M. TAYLOR, M. D., Assistant Demonstrator of Anatomy, Medical College of Virginia, etc., Richmond, Va.

In the six operations for vesico-vaginal fistula, and the two for ruptured perineum, which have been performed at the "Retreat for the Sick" by Prof. Hunter McGuire, M. D., within the last twelve months, the plan of draining the bladder, suggested by Dr. McGuire several years ago, is so simple and effectual that I think it well to call attention again

*Op cit.

to it. Formerly, when the care of these cases, after the operation, fell into my hands, I remember how all of my ingenuity was exercised to find some way of fastening permanently in the bladder, a piece of gum tubing, soft catheter, or anything which would take the place of and be less injurious than Sims' sigmoid catheter. Various plans were tried: tapes were fastened in every conceivable way to the tubing, or to cork through which the tubing passed; but in spite of the greatest precaution, it would often get out of place, permit the escape of urine, and interfere with the success of the operation.

It happened one day that the tapes, cork and all, were found free in the bed, while the position and function of the tube was unchanged. So long as everything was going on well, I determined to let matters alone. The tubes remained in perfectly well during the ten or twelve days it was necessary to drain the bladder. The knowledge thus accidentally arrived at, that the tapes, cork, etc., were only unnecessary encumbrances, that the tubing would remain in the bladder better without than with any retentive means, has been utilized in all operations of that kind since that time, and always with success.

Some time after this, I was very much perplexed to know how to catheterize without doing harm to a patient upon whom the operation for ruptured perineum had just been performed. She was lying on her left side; her legs were tied together: the rupture had been sewed up, and all of the parts were tender and swollen. To introduce the catheter in this position was almost impossible. To turn the patient over on her back, as often as it had to be done, endangered the success of the operation. The difficulty was quickly and permanently overcome when it occurred to me that the gum drainage tube would answer here as well as it did after the operation for vesico-vaginal fistula. In this case, and in one upon which Dr. McGuire operated a few weeks ago, the experiment was eminently successful. All who have experienced the labor which attends the careful after-treatment of these cases, will appreciate a means which will save them, say four visits in the twenty-four hours, and, at the same

time, the patient the pain of having the catheter introduced as often.

Some of the advantages of this tubing over Sims' sigmoid catheter are, first, its cheapness. The sigmoid catheter, made of pewter, is heavy, and those of silver, expensive. The bladder, contracting down on the hard catheter, is more likely to be irritated. The end of the soft tubing will, by virtue of its flexibility, drop into the most dependent portion of the bladder, and thus reach the urine where it is most likely to accumulate. Bending in this way, it becomes a self-retaining instrument in the same way that a metal catheter does. This suggestion, it strikes me, will be especially serviceable to country practitioners who cannot see their patients very often without great fatigue. With a watchful nurse, the labor of the after-treatment is reduced almost to nothing.

The tubing used is the ordinary drainage tubing, cut in pieces about fourteen inches long. The end which goes into the bladder should be punched with a shoemaker's punch, with ten or twelve small holes. Two inches or more should be introduced beyond the vesical end of the urethra. This will cause the tubing within the bladder to balance that on the outside, and it will ensure the organs being thoroughly drained. It will only be necessary to change the tube every third or fourth day, or to free it from mucus, etc., by throwing a gentle stream of water through it with a syringe. The tubing is easily introduced into the bladder without the aid of a probe or grooved director. It should be oiled and introduced as an ordinary gum catheter.

ART. III.—**Injuries of the Head—Lesions of the Scalp.** By E. F. WELLS, M. D., Minster, O.

LESIONS OF THE SCALP.—The thick, tough, inelastic skin of the calvarium is attached to the tendonous expansion of the occipito-frontalis by a dense areolar tissue in which the numerous blood-vessels of this part ramify. Between the aponeurosis and the pericranium is found a very loose areolar tissue connecting these two structures, but allowing great play of the tendon. In this ramify the larger blood-vessels,

and also numerous smaller ones. The pericranium in adult life adheres very closely to the bone, especially at the sutures and over the occipital bone.* In early childhood this membrane is separated from the bones by a thin layer of cartilage and adheres but slightly. In old age, however, the connection is very close and firm in all parts. The pericranium and aponeurosis are endowed with but little sensibility.†

Wounds of the scalp may be incised, contused, lacerated and punctured. They are more numerous than other classes of head injuries, and are especially interesting to, and challenge the earnest attention of, the surgeon on account of the grave complications and consequences that may attend an apparent trivial injury.

Incised wounds are, manifestly less troublesome and less dangerous than any other variety, and, in general, require only the simplest treatment. In these lesions, the parts are in the most favorable condition for adhesive union, and everything possible should be done to favor such an issue. The wound should be carefully cleansed from all foreign substances, and cold or pressure applied to control the hæmorrhage. The hair immediately adjacent to the wound should be removed, but no occasion is offered for the sacrifice of square inch after square inch of hair a yard long, from the head of a woman as was once witnessed by the writer. After all bleeding has ceased, the edges of the wound are to be brought together and maintained in apposition by appropriate means.

For the purpose of maintaining the edges of scalp wounds in contact and at rest, there are no means so successful as the suture, the teachings of three generations of surgical writers to the contrary notwithstanding. Pott‡ and LeDrau,§ in their day used sutures without the fear of erysipelas and other dreaded complications continually in their minds; and the Nestor of American surgery gives his unqualified approval to the practice.|| The only objection ever urged against

*Blandin, *Topographical Anat.*, N. Y., 1853, 8vo, pp. 38–39.

†Samuel Cooper, *Surg. Diction.*, N. Y., 1844, 8vo, 2 Vols. in 1, Vol. 1, p. 462.

‡*Chirurgical Works*, London, 1798.

§*Observations in Surgery*, London, 1758, 8vo, p. 67.

||Gross, *System of Surgery*, Phila., 18 , 2 Vols. 8vo, Vol. 2.

the suture was the liability of inducing erysipelas; yet, if experience proves anything, it must be conceded that the causative relation of stitches to erysipelas remains not proven. The records of the late war favor this view; and we are compelled, by reason and experience, to think, with Otis,* that the danger from this source has been greatly over-estimated, and that the general tenor of text-book writing has led surgeons to entertain exaggerated apprehensions with respect to the use of sutures. These fears have been, without doubt, destitute of the shadow of a foundation.

Stitches have, moreover, numerous and positive advantages. They are easily and expeditiously applied to, and removed from, any part of the scalp, and without the sacrifice of much hair, sometimes an important matter. They are inserted with but little pain, which may be easily prevented by cold or ether, if thought advisable. They permit, at all times, a ready inspection of the wound, and do not prevent the escape of pus, should any form. By this means only, can accurate coaptation of the cut edges be secured, thereby giving the wound the best possible chance of uniting by first intention. Wounds of the scalp heal very rapidly, and stitches may be removed on the second day,† and before they have begun to ulcerate. They should not include the aponeurosis or pericranium.

Adhesive plaster, so long and extensively used and recommended by the majority of authors,‡ should, in our humble opinion, be abolished from the treatment of open wounds of the scalp. The objections to its use are numerous and weighty. Adhesive strips obscure the wound and are with difficulty removed, and during their removal, the edges of the wound are apt to be torn asunder. They prevent the escape of pus, should any form, thereby preventing union and favoring the burrowing of matter beneath the tendon of the occipito-frontalis. Neudorfer§ has pointed out the practical

**Medical and Surgical History of the War*, Part I, Vol. 2, Washington, 1875 p. 16.

†Thos. Bryant, *Practice of Surgery*, London, 1872.

‡Samuel Cooper, *vol. cit.*, p. 460; Robert Druiitt, *System of Modern Surgery*, Phila., 1860, 8vo, p. 324; Wm. Fergusson, *Practical Surgery*, Phila., 1848, p. 463.

§*Handbuch der Kriegschirurgie*, 1867.

fact that where wounds of the scalp are dressed with adhesive strips, the lips are inverted, and healing is long delayed by the growth of the hair. The superficial set of blood-vessels, upon which depends the healing process, lie between the skin and the aponeurosis, and any method intended to promote early union must bring together these vessels. This, adhesive strips assuredly do not do; but, on the contrary, the deeper parts of the edges of the wound are more or less widely separated, while the cuticle of either lip is in apposition, and by the continual exudation of the secretions, prevents immediate union.

It has been recommended that, in case the wound be small, the edges of the wound be kept in place by means of tufts of hair being tied together across the incision; but to this mode of procedure may be urged the same objection as that above applied to adhesive strips, viz.: that the lips of the wound are inverted and the deeper parts pulled asunder.

Collodion has been used to hermetically seal up the wound, but this obscures the wound and prevents the escape of pus.

Contused wounds may be classified as, 1st. Those in which there is a laceration of small vessels in the areolar tissue with limited effusion; 2d. Those attended with extensive ecchymosis; and 3d. Those in which the tissues are pulpified and disorganized.*

The commonest example of the first class are the cephalatomata so frequently met with upon the heads of children—the result of the many blows and knocks to which life at an early age is subjected. They do not often suppurate, but “after two or three days, when a portion of the blood has escaped into the adjacent cellular tissue, and serum has mingled with the original effusion, the tumor often feels soft and fluctuating at the centre, while the margins remain hard; indeed, this condition almost invariably precedes the dispersion, and the tumefaction may now be easily mistaken for a depot of pus, or for a fracture with depression.”†

Belonging to this class is a very peculiar tumor, first de-

*Otis, *Medical and Surgical History of the War*, Wash., 1875, Pt. I, Vol. 2, p. 62.

†Hamilton, *Principles and Practice of Surgery*, N. Y., 1873, 8vo, p. 517.

scribed by Petit,* and after him by Pott,† that may be easily mistaken for a fracture. “When the scalp receives a very smart blow, it happens that a quantity of extravasated blood immediately forms a tumor, easily distinguishable from all others, and generally very easily cured. But it also sometimes happens that this kind of tumor produces to the fingers of an unadvised or inattentive examiner a sensation so like that of a fracture, with depression of the cranium, as may be easily mistaken.”‡ The blood coagulates around the spot where the injury was received, so that the tumor consists of a central hollow of fluid serum, encompassed by a ring of solid fibrine.

The differential diagnosis is sometimes extremely puzzling; but a little careful manipulation will generally reveal the true character of the swelling. If the elevated ring be steadily and forcibly pressed upon by the fingers’ ends for a few minutes, the fibrine will give way and the bone will be felt on the same level throughout.§ After this procedure, it sometimes happens that a grating feeling, like that imparted to the fingers when finely comminuted bone is rubbed together, is observed. This plan may sometimes give equivocal results, and if the patient be laboring under symptoms of compression, and the diagnosis be not cleared up by the procedure above mentioned, no time should be lost in inquiring into the state of the cranium, by making a commodious incision upon the part that has received the blow; for, as Le Drau has aptly said, “it is far more preferable to make a useless incision, than to neglect it in a dubious case.”||

CASE I.—An elderly man fell from a second story window to the pavement. He lay comatose. A large tumor existed over the right parietal protuberance, the edges of which were prominent, and the central depression gave the impression of a depressed fracture. An incision was made, but no fracture found. Death ensued in nine hours, and the autopsy revealed extensive fracture of the base, with an immense clot of blood, but no fracture of the parietal protuberance.¶

**Traite des Mal. Chir.*, tome I.

†*Vol. cit.*

‡Pott, *vol. cit.*

§Hilton, *Guy's Hospital Reports*, 1865.

||*Vol. cit.*, p. 71.

¶Gross, *vol. cit.*, p. 146.

Gross, on the same page, records two other cases of a similar nature, in which an incision was necessary to establish a diagnosis.

In the way of treatment, a coin may be tightly bound upon the tumor, the cure being accomplished by slow pressure; or the cyst may be forcibly ruptured by means of a quick and severe blow, after the method of Champion.* Crepitus is also noticed after this operation, due to particles of fibrine grating upon each other.†

Contusions of such severity as to cause extensive ecchymoses are usually complicated with other lesions of greater moment, such as severe concussion, fracture, etc.

In the treatment of these tumors, the surgeon should not be too ready to make incisions for the purpose of relieving the tension in case the amount of the tension is very great; for it is really surprising how readily, in the vast majority of instances, such swellings are dissipated by such simple measures as pressure, absorbent applications (?), or the unaided powers of nature. However, should pus form, incisions at an early date are necessary in order to prevent extensive infiltration of matter.

In case the contusion has been so severe as to cause disorganization of the tissues, no portion is to be removed by the knife, but a poultice dressing should be applied in order to promote the early separation of the sloughs, after which the wound must be allowed to close up by granulation. Free suppuration, after the parts have sloughed and exposed the bone, may cause meningeal inflammation and death, as in the following:

CASE II.—An intemperate man, aged 30, was struck upon the forepart of the vertex with a beer glass, causing a severe contusion. The parts sloughed. On the tenth day, he was restless, complained of pain in the head, and three days later, symptoms of compression came on. He was trephined, but died the next morning. The autopsy revealed the *diplôe* full of pus, and signs of recent meningeal inflammation.‡

Lacerated wounds are interesting as illustrating a cardinal principle in the treatment of scalp wounds, viz.: that no mat-

**Archiv. Gen. de Med.*, 1827, t. 15.

†*Otis, vol. cit.*, p. 63.

‡H. C. Johnson, *Lond. Lancet*, N. Y. ed., 1859, Vol. I, p. 57-58.

ter how unpromising the laceration may seem, no part is ever to be ablated. Ever since the days of Pott,* surgeons have attempted to save contused and lacerated portions of the scalp.

The facility with which portions of the scalp, apparently deprived of all vitality, and having but the semblance of an attachment, are sometimes made to adhere and heal, is truly wonderful. The scalp, in the neighborhood of the wound, should be shaven, the wound freed from clots of blood and other foreign matter, the parts placed in the best possible relative position, and a compress and bandage applied; for, unless the wound be quite small, sutures are inadmissible, as they place the parts too much upon the stretch.

Punctured wounds of the scalp, when made by an instrument directed perpendicularly, are, necessarily, of slight depth; and when the penetrating body is directed obliquely, the point soon penetrates from within outwards, owing to the convexity of the cranium. The facility with which foreign matters may be deposited at a depth and beyond inspection, affords an explanation why these wounds often give rise to excessive morbid action. In case the cure is delayed from this cause, the surgeon should incise the scalp to such an extent as will allow thorough cleansing, and treat, afterwards, as an incised wound.

Gunshot wounds are vastly more dangerous than other sorts—not from the scalp lesion *per se*, but from intra-cranial lesion suffered at the same time. The records of the late war furnish one hundred and sixty-two deaths from this cause † Gunshot contusions of the scalp, without breach of surface, are almost invariably accompanied with commotion, concussion and inter-cranial extravasation. When the scalp is perforated by a bullet, there is usually suppuration along the tract; but that the tissues are devitalized and followed by the discharge of minute sloughs and matter in every case, as usually taught, is certainly not true, and is not borne out by experience.

Burns, if more than merely superficial, usually cause exfoliation of at least the outer table, and often of both.

*Brodie, *Medical and Chirurgical Transactions*, Vol. 14, p. 408.

†*Med. and Surg. Hist. War*, Pt. I, Vol. 2, p. 93.

CASE III.—A lunatic placed the back of his head on a bed of hot coals and burned off the scalp. A portion of bone, three or four inches in diameter, and including the entire thickness of the skull, exfoliated. Hernia cerebri formed, but was finally covered by a thick membrane, and he lived many years afterward.*

Complications.—Scalp wounds may be complicated with, 1st, hæmorrhage; 2d, erysipelas; 3d, extensive suppuration; 4th, caries and necrosis with exfoliation; 5th, pyæmia; 6th, tetanus; 7th, gangrene; and, 8th, intra-cranial injury or disease—either of which may long delay recovery, or be the cause of fatal consequences.

Hæmorrhage may be primary or secondary, and is occasionally the cause of death.

CASE IV.—A barrister, aged 59, fell upon the pointed projection of a piece of furniture, while alone in his office, dividing the temporal artery, and bled to death in less than two hours.†

CASE V.—After a contused and lacerated wound of the scalp, erysipelas set in, and an incision was made in the temple for the purpose of evacuating matter. Hæmorrhage was profuse and uncontrollable by pressure. (?) The common carotid was tied, and, after a tedious illness, the patient recovered.‡

CASE VI.—A boy of 13 fell upon a circular saw in motion, inflicting a very large scalp wound of the right temporal and parietal region. Hæmorrhage was very profuse, and required the application of six ligatures for its control. Secondary hæmorrhage from three points came on on the eighth day, and the common carotid was tied. The patient fortunately recovered.§

A similar case, but with a fatal result, is recorded in the *Medical and Surgical History* of the war.||

Pressure, accurately and persistently applied, will generally be sufficient to control the bleeding from any vessel of the scalp; but its use must sometimes be persisted in for a considerable time before the opened artery is firmly closed.

CASE VII.—A child was “picked” in the temple by an in-

*Webster, *Lond. Lancet*, N. Y. Ed., 1851, Vol. I, pp. 513-514.

†*Lancet*, N. Y. Ed., 1852, Vol. I, p. 178.

‡Evan Thomas, M. R. C. S., *Lond. Lancet*, N. Y. Ed., 1853, Vol. II, p. 322.

§S. T. Chadwick, M. D., *Lond. Lancet*, N. Y. Ed., 1851, Vol. I, pp. 306-307.

||Part I, Vol. II.

furiated hen. Arterial hæmorrhage was very profuse, and a compress and bandage was applied, which at once controlled the bleeding, yet it was necessary to keep up the pressure for several days before the artery was permanently closed.

Should pressure fail, the ligature, accupressure, or the actual cautery must be appealed to. In applying the ligature to an artery not recently wounded, care must be exercised not to tie the fibrinous tube sometimes found connecting the retracted ends of the artery, and through which the blood circulates, as has been observed by Morgagni, Jeffrey, Burns and others.* This tube, although strong enough to withstand the flow of the blood through its bore, will not bear the ligature. The thread must be placed upon the artery itself.

One of the large arterial branches lying in the loose areolar tissue may be ruptured, and the hæmorrhage may be so severe as to distend the occipito-frontalis from end to end, yet not a drop escape externally. In this case, it will be found best to give exit to the accumulated blood, and apply pressure to arrest the further flow of blood.

Traumatic aneurisms may form as a result of the rupture of an arterial branch, and the question may then resolve itself into a very difficult one of diagnosis, viz.: A pulsating tumor possibly having a central fluid portion surrounded by a hard and sharply defined margin, and a sense of crepitus. Is it an aneurismal tumor, bounded by an annular deposit of solidified fibrine—the friction of the moving particles of which causes the crepitus? or is it a comminuted fracture of the cranium, with escape of the cerebro-spinal fluid into a cyst? Compression of the main artery supplying the part will generally be sufficient to confirm the diagnosis. Incision, evacuation of the contents of the sac, and pressure, is the proper line of treatment.

Erysipelas.—Lesions of the scalp are more prone to take on erysipelatous inflammation than those of any other part of the body. Wounds of every portion of the scalp may be, and often are, followed by erysipelas; but, according to M. Chassaignac,† the region extending from the coronal suture

*Edwards, *Surgical Anatomy*, Phila., 1828, 12mo, p. 56.

†*Bull. de Therap.*, tome 42, p. 400.

to the lambdoidal suture, and extending an inch on each side of the median line, is especially liable to take on this form of inflammation.

Erysipelas may be limited in extent, and confined to the situation where it first appeared; or it may be widely diffused; or it may successively invade every portion of the scalp, and perhaps extend to other parts of the body. It may terminate in either resolution or suppuration. If resolution takes place, the diseased action is not prolonged to a greater length than six days at any one point, although, from its migratory nature, the entire duration may extend to many times this period. If the disease passes on to suppuration, the pus, from not being confined by a membrane,* as in ordinary abscesses, is apt to be quickly and widely diffused in the meshes of the loose cellular tissue between the pericranium and the tendon of the occipito-frontalis.

Erysipelas of the scalp is prone to extend to neighboring structures, such as the pericranium and membranes of the brain, and to the tissues of the face, neck and mediastinum. If the pericranium be involved, caries, necrosis and exfoliation are liable to follow. Distension of the scalp by matter, if neglected, may cause sloughing. Permanent baldness may also follow as a sequel.

Death may occur as the result of prolonged and extensive suppuration, or by extension of the inflammation to some vital part, as the meninges of the brain, larynx, etc.

Current opinion says that erysipelas is a blood dyscrasia of septic origin, and gives us the muriate tincture of iron and quinine for medicinal treatment. Surgically, if the tension be excessive from the œdematous swelling apt to exist, simple puncture, after the manner of Brodie, will give great relief; but should pus form between the aponeurosis and the pericranium, free and early incisions will be required. If, however, the pus be beneath the pericranium, the incision should be as small as is compatible with the free evacuation of the imprisoned matter; for if the incision be free, and the bone be much exposed, it is apt to die. On the other hand, while the pericranium may be greatly distended and loos-

*Fergusson, *vol. cit.*, pp. 115-116.

ened from the bone to an immense extent, yet if the pus be let out through a small opening, it will again come in contact with, and adhere to, the bone, with but little, if any exfoliation.

CASE VIII.—A child, aged 10, fell from a height, alighting upon the head. An abscess followed, with pus beneath the pericranium, distending this membrane and the scalp to a great extent. A small puncture was made, the pus evacuated, and a bandage applied, with the result of only a very slight exfoliation just beneath the lancet puncture.*

When there is suppuration beneath the pericranium, the bone will generally be found carious, and the pus communicating with the interior of the cranium, as shown by the pus welling up through the little holes in the bone, with every pulsation of the brain. Should necrosis and exfoliation follow this condition, the surgeon need have no fears of hernia cerebri, for the dura mater has become very thick, dense and resisting, as the result of the accompanying inflammation.†

Surgical fever, gangrene, pyæmia and tetanus, in common with wounds of other parts of the body, may complicate scalp wounds, and give the case an unfavorable turn. When pyæmia does occur, it usually does not make its appearance until after the lapse of several weeks or months after the receipt of the injury, and then, not as the result of the scalp wound *per se*, but of a subsequent carious affection of the bone.

In this connection, I cannot refrain from calling attention to the statistics of *tetanus* compiled by Yandell.‡ In this paper, the efficacy of calabar bean in the treatment of this neurosis is completely disproved. Inhalations of chloroform, perhaps, offer the greatest promise of a successful issue.

Remote Effects—Injuries of head have been followed by every variety of nervous phenomena, and it has often happened in these cases that the only appreciable or discovered lesion was one of the scalp, leading surgeons in the very commonplace error of ascribing such effects to the scalp wound, entirely ignoring the fact that the force which caused

*Caesar Hawkins, *Lond. Lancet*, N. Y. Ed., 1851, Vol. II, p. 4.

†Hawkins, *vol. cit.*, p. 6.

‡*Brain*, October, 1878.

the scalp wound, probably caused also some injury of the brain, such as commotion, concussion, intracranial extravasation, etc., or that this organ might be subsequently involved as the effect of extension of inflammation from superficial parts. All such after effects must be attributed not to the scalp, but to the organ that gave them birth. Of legitimate sequelæ, we may enumerate neuralgia, temporary or permanent baldness, abscess, caries, necrosis, etc.

ART. IV.—Diagnosis of Renal Diseases by the Ophthalmoscope, with Report of a Case. By J. A. WHITE, M. D., Baltimore, Md., late Professor Eye and Ear Diseases, Washington University Medical College. (Read before Baltimore Medical and Surgical Society.)

Last spring, I read a paper before this Society, on "The Ophthalmoscope as a Means of Diagnosis in Various Forms of Disease," and in it, referred to this instrument as being of frequent use in determining the presence of renal disorder, from the retinal changes, before the other symptoms manifested themselves. I mentioned having, on various occasions, met with cases where the retinal trouble lead to the first suspicion of any kidney disease.

Having lately seen another case of this kind, I thought it might be of sufficient interest to relate it to the Society.

In December last, I was called to see a young lady, 21 years of age, who complained of cloudy vision, "only this, and nothing more." Her near vision was normally acute, but her distant vision, in the last few days, had become blurred. I told her to come to my office and have her eyes properly examined. Two days afterwards she did so, saying that her sight was much worse, and that things at a distance were not only blurred, but very small (micropsia). Her vision with Snellen's test types was, with the left eye, $\frac{2}{3}$ or $\frac{2}{3}$ of normal sight; with the right, $\frac{2}{4}$ or only $\frac{1}{2}$ of normal. A 42-inch convex glass made the vision in the left eye $\frac{2}{3}$ or normal; in the right, $\frac{2}{3}$ or $\frac{2}{3}$ instead of $\frac{1}{2}$ of normal vision, showing the presence of a slight degree of hyperopia, or long-sight.

The ophthalmoscope revealed slight swelling of the optic disk in the right eye, and some congestion in the left, which accounted for the apparent hyperopia. There was no pain or discomfort of any kind, and her near vision was still good.

She could give no cause for her trouble, except that she read a great deal, beginning early in the morning, reading an hour or two in bed before rising, and often reading lying down during the day. This might have accounted for the slight symptoms met with; and to prevent her doing this again, I paralyzed the accommodation with a one per cent. solution of atropia sulphate. I also ordered a pair of smoked coquilles to be worn, to protect the eye from the glare of light, and put a blister behind the ear.

The following day I saw her again, found her vision had sunk to $\frac{2}{7}\%$, and detected two tiny hæmorrhages in the retina, near the disk of the right eye. Close questioning as to her general health for some time back, elicited no clue as to the constitutional cause, except that she had had a violent attack of rheumatism six years previously, with very slight and occasional twinges since. I prescribed iodide and bromide of potassium in combination—ten grains of each three times a day.

Four days later, her vision was only $\frac{2}{100}\%$, and the hæmorrhagic spots had disappeared, leaving small white patches on the retina, with other appearances of the same kind in each eye.

I then concluded we were dealing with a case of albuminuria, and told the family so, who received my communication with some doubt. I proposed artificial leeching of the temples, but she declined to submit to this.

Jan. 6, 1879, she consented to be leeches as her vision was still worse (only $\frac{1}{100}\%$), and the white patches had increased. Twenty-four hours after the leeching, her vision was $\frac{1.5}{100}\%$ —a slight improvement. Her urine was of a pale amber tint, very transparent, with a few flocculi in it; specific gravity 1007, and loaded with albumen. The microscope revealed hyaline and granular casts. The diagnosis of Bright's disease was proven. Up to this time, she had no other symptoms of her kidney disorder, except headache and occasional nausea. I prescribed syrup of iodide of iron, 15 gtt., three times daily.

A week later, I examined the urine again, and found the albumen on the increase. She has general malaise and pallid countenance; headache and nausea at times; but no dropsical or febrile symptoms.

In this case no suspicion of Bright's disease existed until attention was called to it by the retinal changes. What is the exact relation these changes bear to the renal disorder is

a disputed question. Disturbances of vision have long been known to take place with renal trouble; and these disturbances are of two kinds, "amaurosis uræmica," and "retinitis albuminurica"—the former general or cerebral; the latter, local. The former begins very suddenly, and subsides in the same manner, and is generally accompanied by other distinctive symptoms of the renal disorder; the latter is slow in development, with gradual diminution of vision, and is sometimes the first manifest symptom of the kidney disease. The appearances are generally a striped cloudy look about the disk, which is of greyish red color, with blurred margin; the veins are tortuous; the arteries normal or contracted, with extravasations of blood and formation of white patches. In the vicinity of the yellow spot, these white formations assume the appearance of minute dottings, with fine radiating white lines. This picture, which varies more or less in different cases, is usually found in both eyes. These changes may subside, the white patches get smaller, the striation disappear and great amelioration results; but complete recovery never takes place, except in the *acute nephritis* of scarlet fever and pregnancy, and then only when the stasis has not been sufficient to interfere with the nutrition of the optic nerve, and cause atrophy. Such is the opinion of Voelkers, of Kiel, Schweigger, of Berlin, Carter, and a host of other authorities. In *chronic nephritis*; it admits of improvement, and sometimes the sight becomes almost normal; but permanent improvement or recovery rarely or ever takes place.

We find it in every form of renal inflammation, but more especially in the nephritis of pregnancy, and in renal cirrhosis. Of thirty cases examined by Voelkers, two were in cases of pregnancy, and twenty-eight had granular kidneys. Frerichs has found it also in amyloid degeneration, but very rarely.

The retinal change seems to be a fatty degeneration of the cellular and connective tissue of the retina—the *striation* being due to hypertrophy or sclerosis of the optic nerve fibres.

Sir Wm. Gull thinks Bright's disease has its origin in a condition which affects the arterioles of the body generally, and not merely those of the kidney. This seems to be con-

firmed by the fact that the retinal degeneration sometimes precedes the presence of albumen in the urine, and therefore cannot be said to be produced by albuminuria. Dr. Jabez Hogg reports such a case, where the retinal appearances induced him to diagnose renal disease, although no albumen or casts could be discovered in the urine, and his diagnosis was confirmed by the autopsy revealing granular kidney.

Mr. Carter adopts the view of Sir Wm. Gull, and says that all clinical observation points to the renal and ocular disorders as being common consequences of the same antecedent. If this antecedent is disease of the coats of the arterioles which weakens them and obstructs their channels, we can understand how the fatty degeneration takes the place of the natural repair, and how the hæmorrhagic spots are produced. Whatever theories may exist as to the connection between the retinal and kidney trouble, they occur together often enough to lead every medical man, even if he does not use the ophthalmoscope, to examine the urine for albumen in all cases that complain of defective vision, especially in patients approaching the grand climacteric, and in young pregnant women. If this is not done, kidney trouble will often escape detection.

ART. V.—**New Formations.** By EDWARD WIGGLESWORTH, M.D.,
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A VERY EXTENSIVELY DIFFUSED CASE OF LUPUS ERYTHEMATOSUS.—Jamieson reports an example of lupus erythematosus presenting peculiar characters, and distributed over a large area. The left cheek had been affected for twenty years; the hand and feet for eleven. Four years ago, patches appeared upon the nose, and soon afterwards, upon the right cheek, ears, face, forehead and neck. There were no subjective sensations of itching or burning—only stiffness and diminished power of flexion of the fingers; oozing, but occasional bleeding from fissures; scaliness, and habitually cold hands. The nose at present presents the features of the true lupus erythematosus of the Germans fully developed; the hands, and some other parts, the characteristics of the

erythematous lupus of some English writers (Hutchinson *et als*).

A bit of skin from a patch of recent date upon the lobe of the ear, presented on section, after hardening, the following appearances: Around the hair follicles, there were large, dense accumulations of cells—each small, round, and somewhat granular. Here and there were round spaces or alveoli, with a wall composed of fine fibres. These spaces existed in the corium—a few, however, being in the epidermis, some even bursting on the free surface, probably representing milia, arising, as shown by Neumann, from destruction of a hair follicle, or the lobule of a sebaceous gland. Epidermis thin, but was otherwise normal.

Another portion was taken from a patch of eleven years' standing, on the back of the hand. Here the surface of the horny layer was flaky, and at one part there were swollen cells apparently impregnated with colloid material. The layer of Langerhans, separating the horny from the mucous layer, was distinctly marked as a bright band composed of condensed cells. The mucous layer was normal—the rib, or prickle cells being very clearly seen. The papillæ were enlarged, more in breadth than in height. The corium was infiltrated, especially its deeper layers. Here the cells were in parts so thickly packed as to obscure almost entirely the fibres, the tissue becoming so friable that here and there the continuity of the section was broken. The cells occupied the finer portion of the corium, ceasing where the structure resembled areolar tissue. The development was evidently from below upwards. The cells were small, round, granular, and distinctly nucleated. Glands and follicles were destroyed.

Some of such cases appear almost to bridge the interval between the erythematous form and the superficial, non-ulcerating form of lupus vulgaris, when the tubercular element is more, the erythematous less, strongly pronounced. Though the disease arises, as a rule, near the hair follicle, in and around the sebaceous glands, yet, in rare cases, after long continuance, similar morbid changes are found where the sebaceous glands are few or absent. Neumann men-

tions a case where it was met with on the palmar surface of the hand—a feature observed also in the present instance.

The case is improving under treatment with Hebra's spiritus saponis kalinus, and unguentum diachyli, varied with ten grammes of oxide of lead in thirty grammes unguentum petrolei.—*Edinburgh Med. Jour.*, May, 1878, p. 1,006.

LUPUS, SYPHILIS AND SUPERFICIAL EPITHELIOMA, WITH A COMMUNICATION UPON A RARE FORM OF LUPUS, LUPUS CORNUTUS.—Lang regards the term "syphilitic lupus" as unwarranted, and as a confession of ignorance. Etiologically, if the cause is syphilis the result is syphilis, not lupus. If lupus and syphilis co-exist, they are two distinct processes, and should be spoken of as such. Accurate distinctions are the basis of sound teachings. It is true, as Auspitz states, that, in rare cases, a syphilitic infiltration evinces a marked chronicity; but in lupus this is always the case, and the usual rapid, and sometimes "acute, galloping" course is not met with. The diagnosis between the two diseases is not always easy to make, but the processes are, in fact, as distinct as they are later, when the indisputable results of the existing process have removed all doubt. As a rule, however, the characteristics of the two diseases vary to such a marked degree, that many a worthy physician has so accurately described his case of "lupus" as to prove, beyond a doubt, that his diagnosis should, with justice, have been syphilis.

The superficial form of epithelioma is also often confounded with either lupus or syphilis. It is, therefore, in place to report here a case of *lupus hypertrophicus*, which might, with justice, be termed *lupus cornutus*, and which differs from all cases hitherto reported, since this would have been regarded by most observers as epithelioma. Even Von Langenbeck says (*Berl. Klin. Wochenschr.*, 1875, p. 330) that horn-formation may accompany one form of carcinoma of the skin, but has never, to his knowledge, been observed in cases of lupus.

The patient, a girl of 13 years, had upon each cheek an extended patch of apparently hypertrophic lupus, except that the papillary outgrowths, instead of being covered, as is usual, by a crust, were composed throughout of horny layers of epithelium piled one upon the other—were, in fact,

veritable cutaneous "horns." These were easily removed. The base was dry and covered with little cones, either discrete or arranged in prominent and continuous ridges, which were either twisted or straight. As the disease approached the neck, this condition gave place, by degrees, to the usual, perfectly characteristic form of an ulcerating lupus hypertrophicus.

I have already shown (*Mediz. Jahrb.*, 1877) the anatomy of hypertrophic lupus. "The outgrowths from the papillary bodies do not all ulcerate. Their epithelial covering, nearly everywhere present, is so thin that the grouped papillæ show through like granulations—here and there even protruding as a sessile, or pedunculate peg, or even hanging over like a proboscis. Or, a single papilla may develop to a long horn, covered with thick, close layers of epithelium."

The flat form of epithelioma, formerly called rodent ulcer, is often regarded as lupus, and still more often as syphilis. It appears as slightly, or not at all depressed, and is surrounded by a low, hard, pale or pale-red border, which is uneven, and often somewhat striped; or it may appear as a raised ulcer with a well-defined, abrupt margin. The secretion is always slight, drying speedily to a thin crust. The deeper tissues may become involved while the disease is also spreading peripherally. The cancerous infiltration is, however, thin. As soon as a lower layer of tissue becomes infiltrated, the preceding one suppurates away. The result of this is a bowl-shaped concavity. As the disease, although superficial, is not, therefore, always "flat," it may be preferably characterized by the former adjective. One symptom, common to this and other forms of carcinoma, is the pulling inwards and contracting of the surrounding healthy skin, and the older the disease the more marked is this condition. (See also *Wiener Klinik.*, 1876.)

Syphilis may develop upon a person having lupus. This was proved by Waller's experiments 27 years ago. Syphilitic gummata have not been known to occur upon lupus infiltrations, though this is, theoretically, possible. Nor has carcinoma been known to develop upon a syphilitic infiltration of the skin; while, upon lupus, carcinoma has frequently been seen. (*Vide Vierteljahresschr. für Dermatologie*

und Syphilis, 1874—Wien. Med. Presse, Nos. 6 and 8, Feb., 1878.)

LUPUS OF THE LARYNX—A CLINICAL STUDY.—Lefferts quotes ten cases, including his own, of this rare disease as upon record. In all but one, lupus of the cutaneous surface likewise existed. After giving his own case in full, and reiterating with Von Ziemssen the “urgent need of further observation, both with regard to laryngeal lupus generally, and, in particular, with regard to its therapeutics,” he gives the following conclusions:

1. Lupus of the larynx, from our present experience of it, must be regarded as a rare disease.

2. Seven unquestionable cases and three doubtful ones, are alone upon record; in all of the former, lupus of the cutaneous surface (face, neck, back, arms, etc.) co-existed.

3. The diagnosis may be made from the peculiar, and, perhaps, characteristic appearance of the pharyngeal parts, the nodulations, fleshy granulations, and ulcerations of the epiglottis primarily and specially, the clinical history of the patient, and the concurrent signs of lupus of other parts.

4. The differential diagnosis is not unattended with difficulty. Laryngeal tuberculosis, syphilis, and carcinoma, all present certain points of similarity to lupus; especially the first named. From the two last, and likewise from *œdema glottidis*, chronic follicular laryngitis, etc., it may readily be distinguished. The pharyngeal appearances, the peculiar aspect of the epiglottic lesions, and the extent, location, and pathological character of the concomitant ulcerations, together with the clinical history and manifestations of a cutaneous lupus, will serve, if care be taken, to distinguish laryngeal lupus from laryngeal phthisis, as in the latter affection all of the above-mentioned signs fail, and are replaced, to a great extent, by others which are certainly different, and generally regarded as diagnostic. These points are alluded to in detail in the article.

5. The prognosis is unfavorable, and the site of the disease at the entrance of the air-passages, manifestly exercises a marked influence as regards danger and duration.

6. Treatment is more or less empirical, being based, at

present, alone upon what experience has taught of the treatment by destructive agents of the concomitant affection of the skin. Nitrate of silver and cod-liver oil appear to have been of service in certain instances, while in others they have failed; in still others, a sedative and entirely unirritating treatment has succeeded best—if not in effecting a cure, or even arrest of the disease, at least in giving marked relief. Upon this question, further light is earnestly to be desired. (*Amer. Jour. Med. Sciences*, April, 1878.)

MODERN INDIAN LEPROSY.—Carter published, in 1874, a large work on Leprosy under the sanction of H. I. M's Secretary of State for India in Council; also, Official Reports on the Leper Asylums in Norway (1874), and a second series on Leprosy in North Italy, Scio, Crete and Palestine, issued under the same authority (1876). He now reports the results of an Indian tour undertaken at the expense of the Chiefs of Kattiawar, and gives a detailed list of lepers (official), including 601 affected individuals. He considers that leprosy has nothing to do with such wide features as either the race or social habits of a mixed people, and that experience hitherto tends to show that—(1) villages with lepers have not, necessarily, in the main, features any way different from those not so infected; (2) no special caste is peculiarly liable to leprosy, nor an affected individual necessarily the poorest or physically the weakest, etc.; (3) unsanitary conditions are so universal, that one's attention is apt to be perplexed, yet no one defect has, as yet, seemed to call for special notice; (4) the difficulty remains, why only one or two persons are affected amidst a large number, to all appearances placed in identical circumstances; (5) heredity is, by no means, a universal feature of leprosy; (6) sources of contagion can probably never be absent; yet it is practically impossible to trace ordinary cases to this origin, and difficulty No. 4 still remains. The clue, therefore, to the cause and spread of leprosy is yet wanting; in other words, more information is needed, which can be gathered after a prolonged and thorough inquiry. As to the topographical and political areas of leprosy, the two most prominent facts elicited are that (a) Leprosy is most predominant in populous coast-areas; less so

inland. (b) The disease subsides also north of the Bhaona-gar creek and hilly range, in directions where both coast and inland areas exist; and in the Bhal, a considerable, rather barren, maritime area, leprosy is quite absent—showing that mere proximity to the sea has nothing to do with the disease.

The method of dissemination deserves attention. Thus, the chief town always represents a chief “focus” (whether of radiation or concentration); next, the villages immediately around are affected, and beyond these, pass off, as it were, “lines” of leper localities in various directions, which may meet and blend, or become continuous, with similar lines in adjoining districts. This may be said to point to transmission of the leprous disease by means of human intercourse.

The forms of leprosy are the *nerve-lepra* or the *anaesthetic leprosy*, and the more severe *tubercular form*. In West India, the former predominates; in Norway, Crete and Syria, the latter. Women are more subject than men to the milder affection. Age seems to hold no special relation to the appearance of either form; temperament does not vary as among Europeans, though it seems as if the “lymphatic” habit of body is more often associated with nerve disease than the “spare” habit.

The disease begins very frequently, at least, upon the exposed parts of the body, the face, feet and hands. Male lepers are, in India, greatly more numerous than leprous females. The disease is found most prevalent during the most vigorous periods of life. Leprosy may begin at any period after birth, but does not seem to be congenital. It attacks all castes and races, but probably does not attack them proportionately to their respective populations, preferring rather certain groups, large or small, in certain areas: and this, doubtless, in accordance with local events, which must be specially investigated. No new facts were detected in regard to the influence of occupation in inducing lepra. The malady is endemic in certain districts, and occurs sporadically around them without assuming the character of a true epidemic. After gaining a footing, it may slowly spread in some directions and decline in others, without following any method or regular course.

As the rule, lepra only appears among bodies of people numbering upwards of 400 to 500, and is apt to show itself at about the same time in those affected—this correspondence as to date leading to the inference that some cotemporary or local cause is then in operation. Men or women with marked lepra have not seldom large families. About 30 per cent. of all lepers have some direct or collateral taint. The disease has nothing to do with syphilis. Direct contagion cannot be proved. No particular diet has been shown to cause leprosy; and while it flourishes under bad hygienic conditions, it cannot be said to arise from them.

Dr. Carter recommends the complete isolation of the leper; and, if possible, his removal to a suitable asylum. The volume concludes with "Addenda on Modern Norwegian, Cretan and Syrian Leprosy."—(*Modern Indian Leprosy—A Tour in Kattiawar*, Bombay, 1876.)

LEPROSY.—Rohé very justly regards the so-called "lepra of Leviticus" as psoriasis, and that of Naäman, the prophet, as scabies; the Hebrew *zaraath* (with some restrictions), the Arabian *juzam*, the Greek *elephantiasis*, the lepra of the Greek and Latin translations of the Bible, of the middle ages, and of the modern German authors, as leprosy. The *Dal-Fil* of the Arabs is the *elephantiasis* of the middle ages, the elephant's leg, bouenemia tropica, Barbadoes leg, elephantiasis Arabum of the moderns, and has no pathological relations whatever with leprosy. The lepra of the early Greek writers was psoriasis. In the middle ages, before syphilis was recognized, this, too, was confounded with leprosy.

Fifty cases of true leprosy have been observed in the United States. Rohé gives three endemic cases where heredity was positively excluded by the history, and where the disease could not have been due to contagion, nor was it communicated to others, nor even to a spouse who reported "repeated intercourse since the disease first appeared." He would regard the disease as more aptly classed with such affections as lupus, psoriasis or cancer, which depend upon a peculiar disposition, hereditary or acquired, but of whose ultimate causes we know absolutely nothing.

Thus psoriasis, lupus and cancer are not considered conta-

gious by any well informed physician at the present day; while the current belief in the heredity of cancer is rapidly losing ground, since we can, so to speak, produce cancer at will. Although lupus and psoriasis appear to be transmitted in some instances from parent to offspring, no one will venture to claim heredity as a cause of either. It seems to Dr. Rohé, therefore, to be more philosophical to confess our ignorance of the causes, either immediate or remote, of leprosy, than to assume this or that factor as explaining its origin. The impression he would attempt to convey is, that leprosy is not a specific, pathologically definite disease depending upon a known cause, but that it consists in a profound disturbance of the economy analogous to, or more properly, homologous with cancer, beginning perhaps in the nervous system, occurring in all parts of the earth, and affecting individuals of all classes—the origin and nature of which remain for the present unsolved problems.

The pathological anatomy of leprosy has been carefully studied by Virchow, Kaposi, Carter, Neumann and others. These investigators found the skin, nerves and certain internal organs infiltrated with small, round, closely-packed nucleated cells, resembling the cellular new-formations in lupus and syphilis. These cells may undergo fatty degeneration, softening and resorption, but have usually more stability than those of the other affections mentioned. The infiltration of the nerves explains the changes in sensation, there being first hyperæsthesia in consequence of pressure upon nerve fibres, and, later, anæsthesia, on account of abolition of function of the fibres consequent upon the increasing infiltration. The prognosis is unqualifiedly bad. Although patients may be rendered much more comfortable by good food and other hygienic measures, complete recovery is not to be hoped for. The treatment to be of any value, can only be symptomatic.—(*Maryland Med. Jour.*, July, 1878.)

AN INFLAMMATORY FUNGOID FORM OF TUMOR OF THE SKIN. In the annual report for 1873, of the Skin Department of the Vienna General Hospital, and subsequently in the *Vierteljahresschrift für Dermatologie und Syphilis*, Dr. Hans Hebra reported, under the title of "an unusual case," the case in

question. Such titles cannot be too strongly reprobated. They have nothing to distinguish them. They cannot be referred to; the case passes from memory and is lost. Geber, who preceded Hans Hebra as clinical assistant, and in whose service the case occurred, reports it now more at length.

A previously healthy, well nourished Hungarian tailor, aged 47 years, reports malaise and severe itching two years previously from no known cause. Groups of small vesicles appeared upon the face, itched, were scratched and spread. The disease spread downwards over the throat and chest, the neck and back, and by degrees over the whole body. At times some slight relief has been obtained by treatment; subsequently, however, relapses took place, and for the last six months his condition has been much worse. During this time, tumors have appeared, at first upon the face, subsequently upon the rest of the body. Some of these appeared upon spots of previously diseased skin; others came where the skin was healthy. Of these last, some have of themselves disappeared. Fresh manifestations appear as scattered, pin-head sized, papules and pustules, with brown scabs where scratched. Those rather older appear as large patches either covered with vesicles and crusts, or, having lost these, cracked and exuding.

The healing patches of longest duration are infiltrated and covered with scales—no longer swollen, but with a dark pigmentation. Everywhere, but especially upon the normal skin, are light-red, hard, fungoid elevations, several mm. in height, and four cm. or less in length, either smooth or fissured. Near the *pomum Adami*, on the right and left upper arms, in front of each axilla, and on the inner aspect of each thigh are seated pedunculate, elastic, highly vascularized tumors, from a hazel-nut to a goose-egg in size, with lobulated surfaces in places excoriated or covered by yellowish brown crusts. Universal lympho-adenitis exists. Pulse 76; temperature in axilla 37.4 R. No albumen in urine. From August 8th, 1872, to January 27th, 1873, the patient was under daily observation. During this time there was much pruritus, relieved by tar; various degrees of eczema; suppuration of various glands and formation of abscesses, one yielding nearly 150 cc. of pus. *November 19th.* Fever set in with severe pruritus. *January 11th to 19th.* Fever continued; new tumors appearing and rapidly suppurating; moist eczema spreading. *January 25th.* Diarrhœa. *January 27th.* Erysipelas migrans starting from the back spread over the body; at noon, chills

and coma; at 7 P. M., death. At the autopsy, the principal abnormal condition shown was peritonitis, with exudation of pus into the cavity of the abdomen. The internal organs were all anæmic.

Geber furnishes in minute detail the results of a carefully accurate microscopical examination of the tumors of the skin. He regards the pathological process as identical with that described in 1864, by Köbner, under the title of "Fungoid Multiple Papillo-mata." Köbner regards the disease-process as local; some others hold that it is partially or entirely constitutional. It is not contagious; not hereditary; presents itself with or without prodromal fever; is subacute in the form of hyperæmia and exudation into the superficial layers of the cutis; may endure for years without affecting the general health of the individual, and death is due to some intercurrent complication. He considers that the process begins in the connective tissue of the corium; develops by growth of the papillæ in length and breadth, which crust but never ulcerate very deeply; and is a disease *sui generis*, to be classed among the granulation-tumors of Virchow. Geber adds that it is entirely distinct from syphilis, and belongs in a common group with Hebra's rhinoscleroma and Kaposi's dermatitis papillomatosa. A handsome chromo-lithographic representation of a picture of the patient, from nature, by Dr. Heitzmann, accompanies Geber's paper.—(*Deutsches Archiv. f. Klin. Med.*, XXI Bd., 2 and 3 Heft. 1878.)

NERVE-NÆVUS.—Neumann showed a case of this rare disease to the College of Physicians of Vienna. He retains in preference to neuropathic papilloma of the skin, the original name of nerve-nævus given by Th. Simon. The influence of the nervous system upon the skin was alluded to, as shown in anæmias and hyperæmias, or by increased or diminished sweat-production due to mental influence. It is now known that some diseases of the skin arise immediately from disease of nerve ganglia or of the peripheral nerve terminations. Such are cases of zoster. Alopecia originates in some cases from disease of the trophic nerves. The prodromal exanthem of variola is attributed by Th. Simon to paralysis of the vasomotor nerves, and purpura variolosa has been found by Neu-

mann co-incident with, and probably dependent upon, disease of the inter-vertebral ganglia and the spinal column. Anæsthetic leprosy also is essentially a disease of the nervous system.

Of the disease in question, nerve-nævus, V. Bærensprung saw and reported the first recorded case. Other cases have since been observed by Thompson (nævus papillaris); by Th. Simon (who gave the name nerve-nævus to the disease, and distinguished vaso-motor and trophic nerve-nævi); by Gerhardt (neuropathic papilloma of the skin); by Beigel (papilloma area elevatum); by Geber, by O. Simon, and by Campana (eleven cases of nævus).

Neumann's case was congenital, upon a first-born child, of the female sex, and well developed. On the right nates and lower extremity are prominent, dull white outgrowths arranged in regular lines and bands, appearing to the sight upon the soles like blisters; but evidently consisting of firm hypertrophied papillæ the size of millet seeds; and arranged, on the outside of the upper thigh, in bands from 1–2 cm. broad. On the perinæum and around the labia majora are circular bands some three mm. broad. On the outside of the lower thigh are three linear bands about one cm. long and two mm. broad. On the dorsum of the foot are three parallel stripes five mm. broad, one from the heel to the little toe, one to the second, and one to the fourth. This last is one cm. broad. On the sole are two stripes five mm. broad, beginning at the heel and extending to the little and fourth toes respectively. These distributions of the new formation correspond accurately to the distribution of the cutaneous nerves of these parts. The growths increased during the first two months of life, assuming upon the soles a yellowish color: they then disappeared by degrees, first from the calf, next from the thigh, and finally from the feet. The points of special interest here are:

- I. The complete development during intra-uterine life.
- II. The spontaneous cure, whereas nævi generally increase.
- III. The evidence that ichthyotic formations can be congenital.—(*Wiener Med. Presse*, No. 51. 1877.)

THE DIAGNOSIS OF MULTIPLE NEUROMATA.—Gerhardt refers to eight valuable papers upon neuromata, and cites four cases of the disease occurring at Würzburg, together with his own (the fifth); this last at length, with the autopsy; also two cases occurring at Dublin, one case reported by Hensinger in *Virchow's Archives*, and the pathological preparation of a rare case reported by Wegner (*Virchow und Hirsch's Jahresh.*, Bd. I, p. 304). He considers that there have now been enough cases reported to warrant the induction of some general law by an observant comparison of, and a careful judgment upon the facts in these cases. Thus it might, perhaps, be possible to make a diagnosis before the patient reached the *post-mortem* table.

Multiple neuromata may exist upon a nerve or branch only, or may be scattered over the body upon many different nerve-trunks. They are composed of nearly the same number of fibres as the afferent and efferent nerves. The mass of the tumor consists of connective tissue distributed between the nerve fibres. The tumors may be medullate, non-medullate, and ganglionic, all co-existent in the same individual. The process might be regarded as a multiple sclerosis of the peripheral and sympathetic nerves. The nerve elements are not destroyed nor robbed of their functions. The process is more frequent in men than in women. It appears to be hereditary. Five cases are reported of the disease affecting several members in a single family. Where one case occurs, other members of the family often suffer from nerve diseases even when these are not neuromata.

The neuromata are usually found at the autopsy to be much larger than had been supposed during the patient's life, as they frequently lie under the skin. They occur with their longest diameter in the longitudinal direction of the nerve, the course of which they may mark out when numerous and closely pressed together. They feel hard like cartilage. They are very movable, and much more so laterally than longitudinally. Isolated ones may be painful and tender on pressure, multiple ones just the reverse. They may exist from early childhood, or the latent predisposition may be aroused later in life by exposure to cold. The extirpation

of single ones seems often to cause the more rapid growth of those remaining. Hips, shoulders and neck are the favorite locations of the larger forms which here may have a rough or even lobulated surface.

Kupferberg reports a case of neuroma of the lower extremities resembling even elephantiasis. It succeeded a fracture, the cause, probably, of the rapid and extensive growth.

The physiological diagnosis of neuromata seems to be possible by the aid of galvano-puncture—a very weak stream thus applied causing a twitching of the muscle to which the nerve belongs.—(*Deutsches Archiv. f. Klin. Med.*, 5 März. 1878. XXI Bd. 2 und 3 Heft.)

108 *Boylston St.*

ART. VI.—**Nervous Dyspepsia.** By WORTHINGTON MYERS, A. M., M. D., New York, N. Y.

As the stomach and alimentary canal are governed in all their functions by the nerves supplied to them from the cerebro-spinal and sympathetic systems, it requires little consideration to understand how easily the duties of these important organs can be deranged when the systems which preside over their actions are at fault.

Diseases which were formerly supposed to be strictly localized in the stomach, liver, kidneys, etc., are now known to be often merely the sympathetic effects of some mischief in the centre from which these organs draw their supplies of nerve force.

The so-called “biliousness”—indigestion, capricious appetite, pain after food, eructations, regurgitation, acidity, flatulence, spasms, irregularity in the bowels, whether as constipation or diarrhœa—points almost always to exhaustion of nerve force somewhere, rather than to organic mischief (*i. e.*, positive degeneration of structure in the affected parts); and this is easily understood, for the mental depression, sleeplessness, restlessness of mind and body, general prostration, etc., which usually accompany dyspepsia, are symptoms which clearly point to a nervous origin. To this may be added the

significant fact, that dyspepsia is not the disease of the rough and coarsely-fed workman or mechanic, but of the refined and highly-civilized individual whose mental faculties are exposed to a large amount of wear and tear.

One of the commonest, and usually the earliest, symptom of nervous dyspepsia, is *loss of appetite*; this is quickly followed by other symptoms, which gradually drift into all the miseries of hypochondriacism. The sympathy which exists between the mental faculties and the abdominal contents, though complex, is yet clear to the most ordinary understanding; and the experience of almost every one furnishes familiar examples. A mental shock, whether pleasurable or painful, will take away the appetite when at its greatest activity; a blow on the head will produce nausea or vomiting, according to the degree of force used; an over-loaded stomach, on the other hand, brings on severe headache, while fright causes evacuation of the bladder or rectum. All these effects are produced by the intimate relation which exists between these organs and the cerebro-spinal centres, and go far to prove that dyspepsia is truly the consequence of nervous derangement in some part of the system.

This view of the nervous origin of dyspepsia does not contradict the fact that the abuse of stimulants, of opiates, of tobacco, and even of the sexual functions, will produce the disease, because most certainly their constitutional effects are produced more on the nervous tissues than on any others.

When the great sympathetic system of nerves is implicated, the disease has some most important peculiarities imparted into it, which are only what should be expected when we reflect on the central relations and the peripheral distribution of the system. The symptoms are, then, rarely confined to the contents of the abdomen, but show themselves where the filaments of the nerve locate themselves, and alternate with almost every form of disease or disorder in other parts of the body, until the unfortunate sufferer is looked upon by his circle as fanciful and imaginative in his ailments, while all the time he is really undergoing all the miseries of actual though erratic disease.

In this aggravated form, where the cerebral, spinal and

sympathetic systems are all implicated, the leading feature is great mental depression—occurring without any apparent cause, and taking the shape, either from the first or very soon afterwards, of deep conviction in the patient's mind that he is the victim of serious bodily disease, and he is able to describe minutely the symptoms which he fancies indicate its existence. These extraordinary sensations are pointed out by him in almost every part of his body. Many of the feelings he dwells on are quite out of the ordinary course, and, to a casual inquirer, are unaccountable, incredible and absurd.

Nervous dyspepsia is sometimes a consequence of the hereditary nervous constitution, and is induced by various causes acting on the constitutional defect. It is sometimes complicated with actual organic disease—the graver symptoms of which may be entirely obscured by it; but the percentage of cases in which this occurs is small. It is much more common among men than women—in the latter the same condition of nervous system generally producing hysteria instead. Vicious habits of a solitary character, acting on a constitution with a latent taint of insanity, will frequently induce it in the young.

Now the disease, as a careful study of the symptoms from the disease will show, does not originate in the sympathetic system, but only extends to it as it progresses. The pneumogastric nerve is evidently first affected, as shown by the stomach derangements and the presence of large quantities of gas in the stomach and bowels; then the sensorium partakes of the deranged action. The patient's tongue becomes coated and pasty-looking on its upper surface; his breath is foul; his appetite very variable—sometimes ravenous, and as often altogether the reverse. While his bowels are constipated, and the stools frequently loaded with or enveloped in a network of mucus, he is also subject to occasional attacks of vomiting. When these symptoms have declared themselves, the sympathetic system of nerves is fully implicated, and the disease is approaching its meridian. But before this period is actually reached, the patient's temper and disposition are gradually changed; he is pre-occupied with the state of his health to the exclusion of the most important matters in

which, at other times, his interest and affections would lead him to take the most lively and anxious interest. The sensations which fix his attention seemed, at first, diffused over his body, and are indescribable; but their vagueness soon passes off, and is exchanged for an actual localized feeling of great discomfort or sharp pain. This sensation is usually first located at the pit of the stomach, and may be of a gnawing or burning character, or so peculiar in its feelings of distress, as to be quite indescribable. With this there is often much tenderness of the surface of the body, showing that the termination of the sensory nerves are in a state of painful excitement.

Nervous dyspepsia depends on deranged action of the cerebro-spinal nervous system, as evidenced by the fact, that all the organs most liberally supplied from that system, are the parts most severely affected. The primary causes which induce these observations, are to be found in general impoverishment of brain and nerve-tissue, involving often loss or deficiency of elementary matter and disturbance of molecular balance. The urine of such patients is usually phosphatic in a high degree, or charged with lithates or oxalates. This condition, as already pointed out, indicates waste and malnutrition of brain and nerve substance, involving reduction in the power of, or partial suspension of, the healthy nerve-currents—the presence of which is absolutely necessary for the proper performance of organic functions.

On the conditions produced by these nerve aberrations, the old routine treatment of nervous dyspepsia by blue pill, purgatives, alteratives, stomachics, etc., has no permanent effect, unless it be in the direction of eventually increasing the evil. Knowing, as we now do, that the true cause of this disease lies in the nervous centres, our efforts must be directed to such measures as will remove the morbid action going on there, and restore the healthy molecular balance.

The remedies employed for this purpose, on which most reliance can be placed, are the oxides of silver and manganese, the valerianate and sulphate and phosphide of zinc, the phosphate and other preparations of iron, the mineral

acids, phosphoric acid, nux vomica, strychnia, and, especially, arsenic and electricity.

I cannot speak too highly of the following preparation which I have employed, with the happiest results, in those cases of nervous dyspepsia the result of cerebral hyperæmia:

R. Bromid. sodium.....	5j
Ext. ergot., fluid.....	5ij
Pepsin (saccharated),	
Pulv. carbo-lignis.....	aa 5iij
Aqua.....	5ij

M. fit mistura. S: A teaspoonful every 3 or 4 hours.

It contracts the cerebral vessels in their ordinary size, thereby relieving gastric derangement, etc. If constipation exists, I employ, as a purgative, the combination of ox gall and ext. aloes aa grs. xv, and podophyllin, grs. iii, made into five pills, of which one is given every night or every other night, as the case may require.

Now, the selection or combination of any remedies used in this disease, must be made carefully and judiciously, and with a full knowledge of the purposes for which they are given, the particular portions of the nervous system at fault, and the time in which a beneficial result may be expected; so that, while every opportunity is given to a remedy to assert its influence over the disease, no time may be lost by continuing its use after its inefficiency is proved; while, on the other hand, no undue haste should allow the practitioner to change it before it has had its legitimate trial. These cautions are necessary to guard the inexperienced against the too common practice of not persevering with a remedy because no immediate benefit is experienced from its use.

All medical treatment of this disease is most powerfully assisted by attention to diet and regimen, and by endeavoring to employ the patient's mind in light, cheerful and interesting occupations; idleness is as great a bane in this disease as it is in any walk of life.

When, after a fair trial of blood and nerve tonics, the symptoms still continue, either in a modified or unabated form, the application of electricity will be advisable. I can scarcely speak too highly of its effects in nervous dyspepsia.

The application should be made along the course of the spinal nerves for from five to ten minutes daily—a very mild power only being used. The pneumogastric should also be galvanized.

I subjoin a few illustrative cases of nervous dyspepsia occurring in my own practice, and I confine myself to such as have been successfully treated by electricity after all other remedies have failed, to assist the practitioner in forming his own opinion as to the value of the remedy. It must also be borne in mind that these are extreme cases, and that a very large percentage of ordinary cases of this disease yield to a steady persistence in the use of the internal remedies and diet and regimen already named.

Mr. A. R. H., æt. 42 years, merchant, of highly nervous organization, engaged in very active mental labor since his youth. He was subject to attacks of headache, with vertigo and singing in the ears. He was very dyspeptic, suffered much pain, acidity, and flatulency after food, and complained greatly of confusion of mind and inability to concentrate his thoughts on any of his business undertakings. Of late, he had made so many serious mistakes that he was afraid to trust himself in any of his office duties. He also found that the least exertion brought on attacks of severe prostration. He had been under much careful and judicious treatment, and tried all the usual remedies without apparent benefit. After undergoing a course of hydropathy, and giving various German waters a fair trial, he commenced a course of electricity, under my advice, in February, 1876. A continuous current was passed along the spine for twenty minutes, and and along the course of the pneumogastric nerve for ten minutes daily for one month. No perceptible effect was produced during the first week. Early in the second week, he expressed himself much lighter and better. His nights, which had been previously restless and sleepless, became good, and he felt the benefit of the sleep. As the treatment progressed, the other symptoms yielded. The dyspepsia passed off, and with it, of course, the distressing weight and pain after food, and the acidity and flatulence. His mind and memory gradually resumed their power; and by the middle of April, he was quite restored. He still continues in excellent health, although his nervous system is very impressionable.

G. B., æt. fifty years, lawyer, was naturally robust, but be-

came much emaciated. He suffered greatly from dyspepsia, which commenced five years before, after severe and continuous mental exertion consequent on carrying some private bills through Congress. The symptoms gradually increased in severity, and culminated in severe attacks of headache, vomiting and diarrhœa—coming on at uncertain intervals without any assignable cause. His mind was less vigorous than formerly; his nights were sleepless, and he was losing flesh and strength. All the usual means of relief had been resorted to, but without more than temporary benefit. The continuous current was applied as in the preceding case, and after twenty-five applications, he was so much recovered, it was not considered necessary to push the treatment further. The dyspeptic symptoms—headache, sleeplessness, etc.—entirely disappeared; his spirits improved, and with them his capacity for business increased, with returning appetite.

ART. VII.—**Ciphon instead of Stomach Pump for Emptying Stomach in cases of Poisoning.** By HARVEY BLACK, M. D., Superintendent Eastern Virginia Lunatic Asylum; Ex-President and Honorary Fellow Medical Society of Va., etc., Williamsburg Va.

In the February number, 1879, of the *Practitioner*, Sir James Alderson calls attention to the injury which may be done to the internal coats of the stomach by the exhausting power of the stomach-pump; and states, that in all cases of soluble poisons the full effect of the stomach-pump may be obtained by the use of a tube used so as to act as a ciphon without any chance of injury to the patient. In this connection, the following case may be of interest:

On the 5th day of December, 1878, I was called in consultation with Dr. Hendley to see a child fifteen months old who had gotten hold of a box containing some freshly made pills of morphia, and swallowed, as was believed, two grains of that medicine. Several emetics were administered without producing vomiting. Not having a stomach-pump at hand, an India-rubber tube was passed into the stomach; some coffee was poured through the tube, and while filled, the upper end of it quickly pinched between the thumb and finger, and then lowered so as to make a ciphon, by which the fluid contents of the stomach were promptly drawn off. The tube was removed, but soon after again introduced; the stomach re-filled and emptied in the same manner, after which some

strong coffee was passed into the stomach and allowed to remain. The stupor, however, became more profound; the pulse very feeble; the skin cold and clammy, and the breathing stertorous. While in this condition, we administered, by subcutaneous injection, a dose of sulphate of atropia, which brought about decided reaction with dilatation of the pupils in about ten minutes. Soon after this the grave symptoms disappeared without being followed by any unpleasant results.

I think the tube could be passed more readily if filled before being introduced, and which would obviate the necessity of passing any fluid into the stomach where the object was simply to use the ciphon.

ART. VIII.—**Arsenic in Uterine Hæmorrhage.** By J. R. HUMPHREY, M. D., Snickersville, Loudoun Co., Va.

I wish to call the attention of physicians—not to a new remedy, nor to the new use of an old one, but to the too little recognized value of arsenic in the treatment of menorrhagia and metrorrhagia. Whilst we of the present day are so much occupied in the direction of new discoveries and inventions, it is possible that we sometimes overlook or fail to appreciate the value of means already at our command. Some remedies that have been highly recommended, and by men of experience, too, have not attracted the attention they deserve, and have finally almost fallen into oblivion; and amongst such I would class arsenic as a remedy in the above named affections.

Twenty years ago, Dr. A. P. Burns, of Ellicott's Mills, Md., reported in the *Amer. Jour. Med. Sciences*, the good results he had obtained from the use of Fowler's solution of arsenite of potash in uterine hæmorrhage; and his high opinion of the remedy has since been confirmed by other observers. Yet, if one refers to the treatment of this malady as given in the text-books and periodical literature, he will rarely if ever see arsenic even mentioned. The diseases for which arsenic is generally given are so different in their nature from hæmorrhage that when the physician is called to a case of this kind, the remedy rarely suggests itself (even though he may have seen it recommended), for the simple reason that

it is stuck back in some remote corner of his mental laboratory with a group of skin diseases or perhaps chronic chills. Ergot, gallic acid, acetate of lead, opium, cannabis Indica, turpentine, oil of erigeron, aromatic oil of vitriol, and a host of others will come forward at once; and, for the immediate management of the case, he could perhaps make his best selection from these. But, if after the hæmorrhage is checked, there be habitual recurrence at each menstrual epoch, or irregularly between times, then we want something that will forestall such recurrence. Just here it is that arsenic comes in most admirably.

After relieving the patient for the time by the use of hæmostatics, and, if necessary, the tampon, my plan is to direct from five to ten drops [not minims] of liquor potassæ arsenitis, three times daily (after meals), beginning about ten days before the coming period in cases of menorrhagia. In metrorrhagia it is to be used in the same way (as to dose and frequency) during two weeks out of every three, until it has been continued for at least two months. Given in this way, I have gotten better results from arsenic than from any other remedy or combination of remedies. I have sometimes employed the solution in doses of ten drops, three times daily, during the continuance of the flow, with advantage (using other remedies if called for), though I have never followed Dr. Burns' heroic method—*i. e.*, giving ten drops every fifteen or thirty minutes, until hæmorrhage is checked. Dr. Robert Gorman, of this county, uses it, however, in this way, and, he says, with very happy results.

In spanæmic cases, it is well to combine the Fowler's solution with some good chalybeate, as bitter wine of iron. It would be impossible to give accurate histories of the cases in which I have used it, as there has been no reliable record kept of them. The following account is an outline from memory:

CASE.—Miss L. W., white, æt. 20, small and delicate, was taken down on January 22d, 1877, with profuse menorrhagia. I found her very pale and weak, with quick and compressible pulse, much nausea and some vomiting. I was told that she had suffered from excessive and prolonged flow at each men-

strual period, for more than a year, and that her life had been at times almost despaired of. Before the time, at which I saw her, she had been under the care of Dr. C., who had done her no permanent good. Ergot and gallic acid were prescribed at this time, and perfect rest in a cool room was enjoined.

On the 24th, I was called in haste to see her, and, on arrival, was told by her sister that she had been fainting, and she feared was then dying. True enough, her condition was alarming. Pulse barely perceptible at the wrist, and there were extreme nausea, great oppression, and hæmorrhage still continuing so profusely that I was compelled to resort to the tampon, and administer stimulants to save her life. Fowler's solution was prescribed in doses of eight drops after meals, beginning ten days before the next period; and up to September, 1878 (at which time she was lost sight of), there had been no return of her trouble.

In this case there was probably some constitutional hæmorrhagic tendency, as her married sister is given to severe *post-partum* flooding.

In not a few cases I have used the same remedy with as well marked results. I have now under observation a case of metrorrhagia, of seven years standing, that has been under treatment at home and in Baltimore city. Her physicians have not been able to discover any definite uterine malady as the underlying cause. Her menstrual function has always been irregular, sometimes three or four months intervening between her periods. Up to last June, she had been compelled to keep her bed most of the time. She was then put on Fowler's solution, with bitter wine of iron. At last account (January), she was very much improved, was able to ride out and visit her friends, and had had no excessive flow since using the remedy.

The *modus operandi* of arsenic in this class of diseases is enveloped in obscurity. As it effects a cure in some cases of membranous enteritis (causing the membrane to peel off), it is possible that it has an alterative action on the mucous membranes (endometrium) as well as others just as it has on the skin. Whether this be the true explanation or not, it is known that patients whilst taking arsenic for the cure of a skin disease, and who are affected, at the same time, with

breech, and my left over the position of the child's head—thus pressing the first upwards, and the last obliquely downwards towards the pelvic basin. The pressure was kept up firmly and continuously, both during the intervals and throes; each successive contraction brought the hand lower in the vagina, and, at the same time, a rotary movement of the trunk caused the spine to approach the pubis, until gradually the former passed the vulva, and the latter disappeared above the pubic arch. The labor thus progressed until the shoulder descended with the os nearly to the perineum. I then placed two fingers of my left hand on the shoulder and bore it upwards in the direction of the axis of the child's trunk, at the same time keeping up the pressure with my right, placed as before stated. In this effort, I used all the force I could exert in my feeble condition, during the period of several throes, when suddenly the head glided over the crest of the ilium into the pelvis, with a partial retraction of the arm, and the child was instantaneously born.

The placenta was found entirely detached, was easily removed with a moderate quantity of coagula; there was no *post partum* hæmorrhage, no after pains, nor any other accident or discomfort; and my patient, who endured her pangs and perils with a remarkable degree of fortitude, made a speedy and good recovery.

It was a male child, at full term, well developed, and above the average size, but it was blanched, exsanguined, dead. Immediately after the birth, friction, insufflation, and every means at hand was resorted to for its resuscitation, without avail. The umbilical cord was found over the shoulders and around the neck; it was about eighteen inches long, destitute of the usual tortuosities, much attenuated, and not a drop of blood could be pressed from its vessels on section. This accidental position of the cord made it practically a short funis, and caused the death of the child by the premature detachment of the placenta, and was also perilous to the mother. In the early stage of the labor, the foetal movements were frequent and unusually vigorous; and when I made the intra-uterine touch on the rupture of the membranes, and placed my finger in the palm to ascertain which hand it was, I felt a slight contraction of its fingers. This occurred nearly two hours before delivery, and the foetus made no sign of life afterwards, and when the arm protruded it was pulseless and soon became cold. During the labor there was nothing to create suspicion of a short funis, nor if ascertained, do I know of any means whereby the cord could have been

extricated from its position. I therefore arrived at the conclusion that, under the circumstances, the death of the child was inevitable.

A consideration of this case suggests the importance of using external manipulation in assisting the efforts of nature to effect version, before resorting to embryotomy—the latter being an operation more difficult to the accoucheur, and much more dangerous to the patient.

Fibro-Cystic Tumor of Ovary—Ovariectomy—Recovery—Remarks. By GREENSVILLE DOWELL, M. D., Professor of Surgery in Texas Medical College and Hospital, etc., Galveston, Texas.

CASE.—Mrs. Jennie E. Brown, aged 34 years, mother of three children, six years ago, before the birth of her last, noticed a swelling in her abdomen. After the birth of the child, abdominal dropsy ensued, since which time, she has been under the treatment of several physicians, and has been tapped twelve times. Dr. N. tapped her first on the side of the abdomen, and not in the median line.

I was called to the case January 24, 1879. With the history as given above, and the further statements of the patient and Dr. McClanahan (who recommended ovariectomy), to the effect that during the last two or three tapplings, she swooned and came very near dying, and that at no time was the tumor reduced more than one-half in size, and that different kinds of fluid—both in color and consistency—came away, I had little difficulty in arriving at a presumptive diagnosis of fibro-cystic tumor. Whenever the tumor enlarged to the ensiform cartilage (as it did after each of the later tapplings), it became so painful that she always demanded immediate tapping. The tumor was mostly in the right side of the abdomen, and the chief point of pain was about the sigmoid flexure of the colon, and between it and the point where she was tapped on the side.

I believed that the case demanded ovariectomy—that delay could only prove injurious, and consequently, after consultation, we determined to operate during the first favorable weather. But I was taken very sick, and did not see the patient for about a month, when I was called again by Dr. McClanahan.

We found her in about the same condition as when I was taken sick. She had been tapped during the time, and came very near dying. She wished the ovariectomy done as soon

as possible, as Dr. McClanahan thought she would have to be tapped at least every third week. She had come so near dying at the last tapping, that he had despaired of a successful issue of an immediate operation, but suggested that we had better build up her general health a little with tonics, etc., before attempting anything of the kind. She always quickly rallied after each tapping, and was sitting up when we visited her for the purpose of exploring the womb with a probe. We found the uterine cavity normal, with the exception of a slight leucorrhœa. The ovarian tumor, by external and digital examination, appeared to be separated into two parts or lobes. After telling her all the possibilities of the case, she set February 24th for the operation, on which day she was ready for us to proceed.

Feb. 24.—Present and assisting: Drs. McClanahan, Kelly, E. Randall, M. Campbell, Watts, Wilkinson, Haden and medical student Wilcox. Dr. McClanahan administered ether, which was the anæsthetic used. An incision of three or four inches was made in the linea alba, from about an inch below the umbilicus to two inches above the pubis. On opening the peritoneum, a large quantity of serum, of a reddish color, flowed out. When this flow ceased, I enlarged the incision sufficiently to introduce my hand and feel the tumors. The lower one was opened, and a large amount of whitish purulent matter was discharged. Then a large flat trocar was thrust into the large tumor under the umbilicus; but only a small quantity of thick honey-molasses colored fluid escaped. Finding that the fluid would not run through the catheter, I removed the catheter, enlarged the opening in the cyst, introduced my hand and turned out the contents, and scooped out all the fluid in the lower cyst. I then ran my hand over the two remaining tumors, tearing up the adhesions with my hand, separating the omentum from the abdominal wall and the tumors; and turning it to one side, I punctured the tumors with the knife, but no fluid of any consequence ran out. We now found we could not remove the tumors without further enlarging the incision, which was done by cutting upwards, and to the left of the umbilicus (to avoid the round ligaments), to four inches above the umbilicus. We then inserted our hand and rolled out the two tumors by tearing loose the adhesions, some of which were very firm—one being a band, like a muscle, about the size of a pencil holder, running from the lower tumor to the abdominal wall, where the tapping had been done in the linea semicircularis on the right side. This was cut with scissors, and

the two tumors turned out and held by Drs. Wilkinson and Randall; then the emptied sacks were cut loose with scissors, and the tumors removed. The pedicles, which were about the size of the fingers, came from *the left ovary* and penetrated the tumors and spread over all the tumors. These were held up, and a fishing line tied very tightly by Dr. Kelly just below the entrance of the pedicle into the sack—the inside of which seemed cup-shaped, and looked like the inside of a cocoanut. The omentum was then carefully examined and cleaned off with a very soft sponge, dipped in a weak solution of pure carbolic acid. The omentum was much congested, with black venous blood, but was believed to be sound enough to be left. Hence the abdominal cavity was carefully cleansed of all blood and fluids, and the pedicles examined and found long enough to be brought out at the incision. The piece of muscular adhesion was then cut close to the abdominal wall. The hæmorrhage having been completely stopped without ligating any arteries, the incision was closed by quill sutures put in with my hernia needle. Three inches of the abdominal wall, on both sides, was included in these ligatures, thereby excluding from the abdominal wall all, or nearly all, of the anterior portion of the peritoneum that had been attached to the tumors. The ligatures were silver wire doubled and tied in on each side to small rolls of adhesive plaster. Three sets were used to each roll, making in all nineteen ligatures. The two last ligatures were put one above, and the other below the pedicle. A drainage tube of silver was put in, reaching down to the bladder, alongside of and under the pedicle at its lower end, and above at its summit. This tube was made by cutting off my small retention silver catheter just above the curve, about six inches long. The screw was put in place so that no air or fluid could pass. Two silver ligatures were placed through the pedicle below, where it was tied with the fish line, completely securing the pedicle in the deep quill sutures. The cutaneous edges then stuck up about two inches above the quill sutures. The edges were then brought close together by interrupted sutures of silk; and the whole covered by adhesive plaster bands cut about two inches wide and fifteen inches long. The patient was then let up from the ether, and put to bed with flannel folded over the entire abdomen. She rested well, but on coming out from the ether, a small toddy was given her, and a half grain of morphia was injected hypodermically. Before leaving, the temperature was taken, and only registered 98° F.; pulse 110. She rested very well during the night and did not vomit.

During the morning of the 25th, the pulse rose to 26, and temperature to 101°. From that time forward there were no unfavorable symptoms, and I offer here the temperature and pulse taken twice each day by Dr. McClanahan, which shows that the case progressed regularly:

Feb. 25, 8 A. M., temperature 100°F.; pulse 126. 7½ P. M., temperature 103°F.; pulse 135.

Feb. 26, 9 A. M., pulse 104; temperature 101½°F. 2 P. M., pulse 95; temperature 100°F.

Feb. 27, 9 A. M., pulse 94; temperature 100°F. 9 P. M., pulse 100; temperature 101°F.

Feb. 28, 9 A. M., pulse 96; temperature 100°F. 9 P. M., pulse 106; temperature 101°F.

March 1, 9 A. M., pulse 100; temperature 101°F. 9 P. M., pulse 116; temperature 103°F.

March 2, 9 A. M., pulse 106; temperature 101°F. 9 P. M., pulse 104; temperature 101°F.

March 3, 9 A. M., pulse 88; temperature 99°F. 9 P. M., pulse 100; temperature 101°F.

March 4, 9 A. M., pulse 96; temperature 101°F. 9 P. M., pulse 108; temperature 102°F.

March 5, 9 A. M., pulse 96; temperature 101°F. 9 P. M., pulse 86; temperature 100°F.

March 6, 9 A. M., pulse 86; temperature 100°F. 9 P. M., pulse 88; temperature 100°F.

March 7, 9 A. M., pulse 84; temperature 99°F. 9 P. M., pulse 88; temperature 100°F.

March 8, 9 A. M., pulse 75; temperature 99°F. 9 P. M., pulse 78; temperature 100°F.

The bowels at times became painful, and filled with gas, which condition was relieved by injections of soap-suds; morphine was continued to keep her entirely free from pain. Diet was sweet milk, soup and gruel.

On the 10th day, there was considerable pain in the bowels; and Dr. McClanahan gave her an enema of gum arabic solution, which was retained. This failing to give relief, the soap-suds were continued, and castor oil in brandy were given until the bowels were moved, which produced considerable pain, as the discharges were large, round white scybalaë, the size of small eggs. In a few days these had all passed away, and there was a slight whitish discharge, which was checked with laudanum, after which there was no trouble with the bowels. The first six quill sutures were removed on the ninth day, and the others on the tenth and twelfth. Those on the cutaneous surface were removed at

various times as they became loose, and as the adhesions became perfect—all being removed by the twelfth day. The ligature of the pedicle (fish line) came away on the 15th, leaving the place healthy and granulating. Adhesions were perfect everywhere; but pus came out at almost every opening where the silver wires passed through on the quill sutures, leaving a space between them of over four inches. The abdomen came down flat, and the ridge gradually disappeared, and all parts became perfectly smooth and natural. The drainage tube was unscrewed every day to see if blood, mucus or pus were to be found in it, but none was seen, nor were there any bubbles of air or gas. The tubes were finally removed on the twelfth day, and the opening where it passed through the abdomen was well closed in twenty-four hours, and no discharge ever issued through it. The patient seemed to gain strength, and improve in color and flesh from the second day.

About the 16th day, there was some swelling of the left leg, and considerable tenderness of the groins, which was treated by bandaging and iodine and nitrate of silver solutions, which gave relief, and these conditions have nearly disappeared. The patient sat up on the 26th day, and is now (five weeks after the operation) attending to her children and house. The leg is still a little swollen, and up to a few days since, there was a slight discharge of pus from the point where the pedicle came through the abdominal wall; all other openings had healed up long ago.

Remarks.—The two solid tumors were opened after the operation was over, and found to be firm but filled with many cells, containing various kinds of semi-fluids, and variously colored substances. The entire tumor would have weighed about forty pounds, besides the dropsical fluid which came from the abdomen on the first incision.

Since this case, I have made a diagram of a drainage tube, which I have invented for ovariectomy, and sent it to Mr. Ford, of Caswell, Hazard & Co., New York, to be made of the following shape:



It is to be made of silver, and flat shaped; on its sides are

two eyes (to hold it from slipping out or in) just below the discharging pipe. We had no use for the drainage tube in the above case, but as it does no harm, and as in cases of septicæmia, it would enable us to thoroughly wash out the abdomen, by putting a syringe in the screw, and injecting a disinfectant fluid through the tube, to be returned through the pipe, and as this can be repeated as often as necessary, it seems to me that this may be a useful instrument. I think, from the history of cases which I have read, this would save most cases from septicæmia. The putting of the quill sutures so low down, no doubt had a good effect in compressing the abdominal viscera; and it also prevented hæmorrhage.

We think this case further proves that in all cases the peritoneum should be well included in the deep sutures, and that the dread of peritonitis is a myth, if no foreign matters or blood are left, as I have so often proven by my operation for the radical cure of hernia.

This is the only case of ovarian tumor that I have ever seen in Galveston, and the second one I have seen in my life of thirty-two years practice of surgery. I saw one case in Philadelphia in 1872, with Drs. W. H. Pancoast, Levis, and others, but no operation was performed at that time. Dr. Grant, Professor of Physiology in the Medical Department, Soule University, operated on a lady in 1866, but the patient died next day. I have no history of the case. The abdomen was opened by three medical gentlemen of this city for ovarian tumor, and none could be found. An interesting history of this case will be made in future, as the woman recovered with a ventral hernia. The tumor was composed, no doubt, of a floating kidney, and disappeared when she assumed the recumbent or dorsal position. She is now at Hotel Dieu, New Orleans, and was a patient of mine before and after the operation.

I have had ten or twelve cases of fibroid tumors of the uterus in this city—one measuring forty-two inches, with three lobes, and has been relieved, or, at least, the tumors have been reduced to the size of oranges, and the patient is now at work. Tincture of ergot, muriated tincture of iron and laudanum were entirely relied on—given internally and by injection per rectum.

Another patient (colored), who measured forty-six inches around, was placed under the same treatment. There were great hæmorrhages at times from the uterus. The tumors were reduced only two inches by ergot, iron and laudanum, after three years' treatment. But she walks around, looks well and makes a living.

Another case (white) was fourteen years under observation; was suffering from general dropsy in 1863, with a uterine fibroid as large to the eye as the womb of a woman at the ninth month of pregnancy. The dropsy was relieved, and she is still living—as large as ever, but there has been no increase in her size. She walks about, does her household work, and looks healthy.

During January, 1878, I saw a case from Matagorda county (colored) who had a small fibroid. Uterine hæmorrhage was profuse at times, and the woman was subject to intermittent and remittent fevers. The usual remedies—ergot, iron, laudanum, blisters, etc., gave no permanent relief. The tumor was only about four inches by three. She returned home after two months' treatment, and died a few days after of uterine hæmorrhage and remittent fever. I have five other cases of small tumors under observation, but of no special interest.

I have found that ergot, though it will not always cure, has usually stopped the growth of fibroids. I have never resorted to excision of tumors external to the uterine cavity of a fibroid character.

Dr. R. S. McClanahan attended the case reported above in detail with me daily; the other gentlemen called were assistants.

Clinical Reports of Skin Diseases. By JOHN HERBERT CLAIBORNE, A. M., M. D., Ex-President and Honorary Fellow Medical Society of Virginia, etc., Petersburg, Va.

Obstinate Case of Psoriasis Palmaris, with Eczema, Cured by Blood-Letting.—In this lady's case, though the disease was chronic as to time (she having suffered from it more or less, and been under treatment for it for perhaps a year), it was, when I saw it, in a subacute, if not an acute state. There

were redness, heat, swelling of the surface, with the vesicles, discharge and crusts of eczema, and the peculiar scales of psoriasis. The lines in the palm were also deeply fissured, and some of them bleeding. There was also general malaise, with enlargement and tenderness of the glands, both in the axilla and groin. The lady was about 50 years of age, and had ceased to menstruate for several years; she had always enjoyed unusually good health. The eruption was sometimes more, and sometimes less, but all the time annoying and unpleasant. She has not been idle in seeking remedies, but has been under treatment from the commencement of the disease, and under the care of some excellent medical advisers (one of exceptionable note), but without visible improvement. She has had tars, and soaps, and ointments on the outside of her; and arsenic, and iodine, and potash, and mercury on the inside of her; and she has faithfully and patiently rubbed, and bathed, and swallowed until her patience is well nigh exhausted.

She applied to me on the 1st July, 187-, not so much for a prescription, as to ask me to bleed her—giving a very succinct and intelligent history of her case and its treatment, and at the same time urging the opinion that it was connected with “her time of life”—that it was the result of the cessation of the menstrual flow, which she had not seen for two years, and that she would never recover from it until she lost some blood. As she was from another State and latitude, I suggested that possibly change of climate might act as an adjuvant to other treatment, which I proposed to inaugurate, and begged that I might be permitted to try some local and constitutional remedies that I had found efficient in similar cases.

She consented rather unwillingly, but followed my advice very carefully for about six weeks, when she returned, none the better for my treatment, and again urged the bleeding from the arm. I corded up her arm, took about thirty-two ounces of blood before she manifested any sign of faintness, and dismissed her, requesting her to call again in a week. She did so, and with the most wonderful improvement in the eruption, and exultant confidence in her own treatment—which I was compelled to endorse and approve. Another slight bleeding at the end of a fortnight completed the cure. She was under my observation for two years subsequently, but no relapse had occurred up to that time. Her general health was excellent.

Obstinate Case of Chronic Eczema, with Psoriasis—Confined

to Knees and Elbows—Cured by Chrysophanic Acid.—This lady, æt. 46, has been suffering with this cutaneous eruption about eighteen months—maybe longer. She is otherwise in excellent health, of florid complexion, plethoric, and disposed to be corpulent. There is infiltration and thickening of the dermis over the whole anterior aspect of the knees and posterior part of the elbows—with crusts and fissures of eczema about the central parts of the eruption, and abundant scales of psoriasis on the outer boundaries. The subjective symptoms are itching and burning. She was disposed to be fleshy, seemed well nourished, and was free from any traceable taint of serofula or syphilis.

As her present condition, however, was bad, I placed her under an alterative course of mercury with cinchona for a few weeks; then upon arsenic, iodine, potash, etc. The first local treatment was of soothing character—lotions of flaxseed tea, meal and water, ointment of oxide of zinc, and subsequently, of course, all the tars, precipitates, red and white ointment, gloves, total disuse of hands, etc., including electricity—constant current.

The general health was, in the course of two months, re-established, though during the time there was softening and suppuration of the glands in one groin and in both axillæ. The local symptoms, however, were most obstinate and persisting. Sometimes there would seem to be fair prospect of recovery, and there seemed as much improvement under the galvanic current as under any other remedy, when some *contretemps* would occur, and the whole work had to be commenced anew. Finally, after about one year of discouraging treatment, I commenced the use of *chrysophanic acid*. Ordering an ointment of one drachm to the ounce of lard, I directed her to apply it daily, continuing, at the same time, the use of gloves. The disease commenced to improve at once, and in a month was nearly well. At this time—some several months after the discontinuance of treatment, she makes no complaint.

The chief trouble in the use of the acid was the difficulty of thoroughly incorporating it with the menstruum. No amount of trituration will do away with the gritty particles—which of themselves, besides the essential nature of the remedy, caused, occasionally, more local irritation than was desirable. The goa powder, I think, would not be liable to the same objection, and in a similar case, I should resort to the use of that.

Case of Uterine (Fibroid) Polypus—Removed by Écrasement.
By J. ADRIAN GOGGANS, M. D., Bulger's Mill, Ala.

Mrs. Margaret A. Goodman, aged 46 years, commenced to menstruate when 15½ years of age; married in her eighteenth year, and gave birth to her first child at 20. She has had five children—one still-born in 1859. She was attended by a midwife in 1859, who told her that from that time she had retroversion of the uterus. The patient herself tells the writer that, from the date of the still-birth, she was unable to evacuate the bowels without first getting on her knees and breast (Sims' position) for a few minutes. She also suffered from menorrhagia and metrorrhagia until 1865, when she again became pregnant, and gave birth to another healthy child. About three weeks after parturition, she began to have periodical facial neuralgia—returning on every eighth day. It has continued to be very distressing to the present time, notwithstanding the constant use of iron, quinine and other tonics, but is not now so strictly periodical. However, she made a tolerably good recovery, but continued to suffer from irregularity of menstruation, etc. She gave birth to her last child in 1867, when she suffered from *post-partum* hæmorrhage, and had to remain in bed the most of the time for twelve months. The physicians in attendance gave various preparations for the purpose of controlling hæmorrhage, but the symptoms could only be palliated for a short time. She then began to improve, and soon was able to walk about the room, but constantly suffered from neuralgia, menorrhagia, metrorrhagia, and, occasionally, from amenorrhœa.

The writer was called to see this lady, for the first time, in May, 1877. She was then suffering from profuse hæmorrhage, but was unwilling to submit to instrumental examination. Still, the symptoms were controlled to a certain extent, by astringents, cold and acidulated drinks, tonics and hygienic management. Her health continued to be about as good as it was for the past few years, until August, 1878, when she again came under treatment. She then had malarial fever, with marked enlargement of the liver, and was almost exsanguined from a constant uterine hæmorrhage. Upon introducing the fingers into the vagina, they came in contact with a hard, movable mass, protruding from the os uteri, which was globular in outline. By conjoined manipulation when the patient was upon her back, the uterus was

found to be *in situ*. There was no difficulty in passing the sound into the uterus beyond, below, and on either side of the mass; but besides this, the sound revealed only the presence of retroversion. The patient being placed upon the side in Sims' position, and Sims' speculum adjusted, the mass could be seen hanging into the vagina. Besides, the pedicle could be felt and traced with the finger towards the fundus of the uterus, and the diagnosis of fibroid polypus was made certain.

There were two prominent symptoms, namely—the changes going on in the liver, and hæmorrhage. The portal circulation was at once acted upon by a mercurial cathartic, and followed by cold drinks and elixir vitriol, constantly avoiding iron, on account of its increasing the tendency to hæmorrhage. She improved rapidly, and by Oct. 30th was able to walk about the room, on which day the operation for removal of the growth was performed—Dr. J. P. Goggans being present. The method of operating decided upon was, to place the patient on the side and remove the growth by *écrasement*—Smith's wire-loop *écraseur* being the instrument employed. As there was not much difficulty in encircling the polypus by the wire, it was soon accomplished, and it was easily and rapidly removed. The operation was not attended by pain, and hæmorrhage was very slight. At that time, the pulse and temperature were normal, and continued so until Nov. 2d, at 3 P. M., when the temperature was up to 100° F.; pulse, 90. During the time of convalescence, she used a vaginal injection of dilute carbolic acid, and took at least ten grains of quinine daily for the purpose of guarding against constitutional toxæmia.

Nov. 3d. Patient doing well; pulse and temperature normal, and continued so until Nov. 9th, 8 A. M., when she was found to be suffering from localized pain in the abdomen; anxious expression; temperature, 100° F.; pulse, 90. As the above symptoms could not be accounted for by vaginal touch, a closer general examination revealed gastric, supervening upon portal congestion, with great tenderness in the hepatic region. I prescribed morphia, and followed it by calomel and soda every two hours. At 6 P. M., temperature 101½° F.; pulse, 105. She had two or three bilious discharges from the bowels during the night.

Nov. 10th, 8 A. M. Temperature, 101° F.; pulse, 100. Prescribed quinine, with elixir vitriol, every two hours. 9 P. M., temperature 100° F.; pulse, 95.

Nov. 11th, 12 noon. I saw her in consultation with Dr.

J. P. Goggans. Temperature, 99° F.; pulse, 84. Perspiring freely, and feels well. Vaginal examination shows no pelvic inflammation. Os nearly closed to normal size; no discharge from the vagina. Continued quinine and elixir vitriol every two hours, and the most nutritious diet that she could be induced to take. She began to grow worse at 9. P. M.; abdomen became tympanitic and gurgling. Ordered a warm enema, which caused the bowels to discharge a quantity of hardened feces. Rested well during the night.

Nov. 12th, 8 A. M. Temperature, 101° F.; pulse, 100. Quinine and morphine were ordered, to subdue pain.

Nov. 13th, 9 A. M. Resting well; skin moist; bowels moved once during night. Temperature, $99\frac{1}{2}^{\circ}$ F.; pulse, 90. Quinine continued.

Nov. 14th, 9 A. M. Saw her in consultation with Dr. J. P. Goggans. Temperature, 99° F.; pulse, 80; skin moist. Bowels discharging dark bilious matter; some tenderness and typanites. Prescribed flaxseed-meal poultice over the bowels, with quinine and elixir of pepsin, bismuth and strychnia internally.

Nov. 15th, 9 A. M. Temperature, $98\frac{3}{4}^{\circ}$ F.; pulse, 76. Has had three or four discharges of bilious matter from the bowels. Slight hæmorrhage from the uterus. Uterus much larger now than at any time previous, but not as much tenderness. Quinine and above elixir continued.

Nov. 16th, 9 A. M. Temperature and pulse normal. Still some uterine hæmorrhage. Same prescription continued.

Nov. 18th, 12 noon. Temperature and pulse normal. Uterus of normal size. Same prescription continued.

Nov. 25th, 9 A. M. Found the patient able to walk about the room. Pronounced her convalescent.

A Case of Direct Incomplete Hernia—Operation and Rapid Recovery—Removal of Testicle. By M. D. C. M. SUMMERLIN, M. D., Sun Hill, Ga.

I was called to see Mr. Jack Horton, æt. 35, on the morning of the 27th of December last. I found him physically strong and robust, but suffering severely with pain in the left inguinal region; vomiting frequently, but no stercoraceous matter. Upon examination, I found a hard, compressible tumor in that region. He was suffering with gonorrhœa also. I administered chloroform, and with the aid of his brother, attempted to reduce the hernia by taxis. After sev-

eral unsuccessful attempts, I sent for Dr. Cheatham, living near by. He was absent from home and did not meet me until the next day, when we both failed as before. We concluded to call in Dr. Mathis, of Sandersville. He met us the next morning, accompanied by Dr. Wm. Rawlins, who had just returned from the hospitals of London and Paris, and who is making a specialty of surgery. It was decided that the knife was the only remedy. The patient informed us that he was suffering from gonorrhœa, and that the left testicle had never descended into the scrotum.

Dr. Rawlins, being requested, operated with the assistance of the rest of us. An incision some two and a half inches in length was made immediately over the stricture. The dissection was carefully but very rapidly made, and soon the hernial sac was found.

While discussing the proper method of further procedure, the sac gave way, discharging three or four ounces of sanguineous fluid. When the parts had been sponged dry, the first thing to present was the long lost testicle, which was standing out in bold relief. This was dissected away, and the artery ligated. The entrails were returned after enlarging the stricture. The omentum around, and for several lines in width about the protrusion, presented a very unhealthy appearance. A triangular shaped portion was removed. A needle armed with catgut was passed through above the line of demarcation; the needle was cut away, leaving the ends of the ligature free, which were tied and passed completely around the base and tied again. The wound was closed with three stitches, leaving sufficient drainage below. A roller bandage was next applied. The patient was put upon iron and quinine; also large doses of opium, to keep bowels from moving. Very little fever followed, and in one week I understood the patient was ploughing. The only thing he found to complain of was, he was sorry we did not remove the other testicle, as both these organs had caused him an immense amount of trouble. This was his seventh attack of gonorrhœa.

A Case of Supra-Pubic Aspiration of the Bladder for Retention of the Urine from Impermeable Stricture. By RICHARD T. STYLL, M. D., Richmond, Va.

CASE.—I was called to see J. M., white man, aged 37 years, who was suffering from severe pains in the hypogastric re-

gion, frequent and violent unavailing efforts at micturition, skin hot, pulse quick, and countenance expressive of great suffering and anxiety. His bladder was greatly distended, and he stated that he had not been able to void his urine for two days. Upon examination, I found the cause of all this trouble to be an impermeable stricture of the membranous portion of the urethra. Being unable, after repeated efforts, with the aid of chloroform, to pass the catheter, and recognizing the importance of emptying the bladder, I determined to puncture that viscus.

In choosing the manner of puncturing the bladder, I decided upon the supra-pubic operation with Dieulafoy's pneumatic aspirator, as offering the most convenient and least dangerous means of accomplishing my object. The needle of this instrument is too small to interpose the objection which is usually made to the supra-pubic operation, viz., the danger of infiltration of urine into the tissues around the opening, and the consequent inconvenience of a fistulous opening being left.

Having determined upon the operation, I passed the needle through the abdominal walls, in the mesial line, immediately above the pubes, then downward and backward into the bladder, and pumped from thence about two pints of partially decomposed urine. I then injected through the instrument the following:

R. Tinct. opium.....5j.

Warm water.....⊙j.

Which I allowed to remain a short while, after which I again emptied the bladder. This operation I repeated at intervals of twelve hours, for a period of three days, when I was able to pass a No. 2 catheter. Catheterism had been attempted every day. Of course the regular line of constitutional treatment was kept up during the management of this case.

The patient, when last heard from, was doing well, and a No. 8 catheter could be passed with ease.

Original Translations.

From Spanish and French. By CHAS. R. CULLEN, M. D. (P. O., Richmond, Va.), Hanover county, Va.

Explosion of Scrotum.—"During a hot October day, a soldier on guard at Fortosa, was lying down on the ground in

the sun, and all at once, he heard a loud report, when he found portions of his clothes torn from him, and warm blood flowing from him. The whole anterior hemisphere of the scrotum had disappeared, leaving his testicles uncovered. In this situation he was immediately taken to the hospital, where he made a good recovery. We leave to the good judgment of our readers the interpretation of this phenomenon, but doubtless the opinion we entertain is a correct one. The confinement of gases in the scrotum, increased by the hot rays of the sun, produced this explosion."—(*Revista de Med. y Cirurg. Pract., Madrid.*)

Ascitis Spontaneously Cured.—Dr. Rafael Forns related the case of a man who had been tapped five times. After the last operation, the prostration indicated approaching death; and just as the extreme tension of the abdominal muscles called for tapping again, the patient commenced recovering, with return of appetite and increased strength; and from that day, the accumulation of water became less, and the man was completely cured without taking any medicine.—(*Ibid.*)

Chloral in Headache and Constipation.—M. L. Seure praises the good effects of this drug, both as a bath and by enema, thereby saving the stomach. One of his patients, troubled with constant headache, used forty-five grains hydrate of chloral in half a gallon of water, and bathes freely with this drug. Soon after bathing, the taste of chloral was perceived in the *taste*. The headache gradually disappeared; the usual nausea likewise left. In half an hour only a slight headache remained. One hour and a half afterwards, the patient dressed herself and entertained company.

Chloral answers similarly when given per rectum, and supersedes, in a great measure, quinine and morphine, without disturbing the digestive functions.—(*Ibid.*)

Hydrophobia Cured by Curare.—A boy, 12 years old, was bitten by a mad dog. After eighty days incubation, the usual symptoms appeared, and were treated by chloroform and morphine without results. Subcutaneous injections of twenty centigrammes of curare, in seven doses, were made in five and a half hours. From the first injection, muscular and spasmodic attacks ceased. The fear of light and of water soon followed, and a gentle calmness of the whole body succeeded. Symptoms of paralysis appeared during two days. Forty-eight hours after suspending the medicine, hydrophobic symptoms re-appeared, and after giving three centigrammes of curare, disappeared a second time, followed by a permanent cure. The patient slowly recovered in two

months. The points of injection were considerably inflamed.—(*Gazette des Hôpitaux*.)

Guarana.—Drs. Vegas and Montes de Vea discuss the value of this plant in asthmatic troubles. It is found throughout the tropical regions, from the Atlantic to the Pacific Oceans. It is called by different names in different countries, as yaquima hembra, in Puerto Rico; guaruma, in Panama; yarumba, in Peru; ciatotapatl, in Mexico; amhanba and ambaitniga, in Brazil; sambacuin, in Pernambuco; matatanba, in Alagoas; pé de galinhe, in Sejiipe; ambay, in Paraguay; trumpet tree, in Guayana and Jamaica. It corresponds to the family of nitocarpeas, and the urticeas of ancient authors, and to the diocia diandria of Linneus. The trunk of the plant or tree is from 36 to 46 feet in height, full of moderate size and straight branches, of ash color, presenting the tropical form of the Mamon—(*carica papaya*). The bark of the ambay is used as an astringent in diarrhœa and blenorrhœa. The twigs and buds, in the form of a decoction, are used in bruises or abrasions of the skin, and echymosis. The juice, mixed with equal parts of milk, is used in gonorrhœa and leucorrhœa; and the pulp of the trunk of the tree is employed in cancers; the decoction of the leaves in pulmonary complaints, and in simple bronchitis. In Paraguay, a decoction of the twigs and leaves is employed in dropsies, in hepatic affections, and in the neuroses generally. Its virtues are analogous to the dedalera. It is considered a specific in asthma. In anæmic affections, palpitations of the heart ceased under its prolonged use. Wine of guarana has been beneficially used in the capillary bronchitis of children by Dr. Bonanng, of Naples. By its use, the quick respirations were soon changed from 50 to 26 in the minute; at the same time, a little ipecac and cutaneous revulsives are to be used as adjuvants.

Physicians' Black Book.—The physicians of Peru have formed a society for their own protection, and have a black book containing the names of all the members, and 2,608 names of debtors, with the amount due from each of them for medical services. The regulations require each physician to refuse attendance to any one (except in case of urgency) unless satisfaction is given to the previous physician.—(*Gaceta Medica de Lima, Peru*.)

(The grocers of Cincinnati have a similar society, but have a regular sale of unpaid bills to the highest bidder.)

The country physicians of this State need some such society to protect themselves. Hardly one physician in twenty,

with a large practice, and keeping two horses in constant use, can collect one thousand dollars per annum. Although the prices are the same as for the past fifty years, yet it seems that all other bills are settled before the family physician can get his accounts paid.—*Translator*).

Aspidosderma Quebracho.—Dr. Peron (*Anales de la Sociedad Argentina*, Nov., 1878) describes a new plant called the *aspidosderma quebracho* (Apocynace). It was long ago used by the Jesuit missionaries as a febrifuge and antiperiodic. Its properties resemble those of the cinchona bark; but the intermittent fevers return immediately after its discontinuance. The fever diminishes, as also the force and frequency of the pulse. Farther reports will be made after trial.—(*Revista Medica Quirurgica*.)

Salt-Water Inhalations.—In the notable work of Prof. Montegarra, excellent therapeutical effects are attributed to salt-water inhalations. The first effect is an agreeable excitation of the whole body, with increase of appetite. These inhalations are beneficial in catarrhal inflammations, in laryngitis, chronic bronchitis, pulmonary tuberculosis during the first and second stages, caseous pneumonias and chronic pneumonias of different forms, and in scrofulous affections. It is contraindicated in rapid pulmonary phthisis, which is generally accompanied with fever and bronchial irritation.—*Revista Quirurgica*.

Glycerine in Hæmorrhoids.—Dr. Joung habitually prescribes glycerine in diabetes, and in one patient with hæmorrhoids, noticed immediate relief. In the next case of tuberculosis with hæmorrhoidal flows of blood, where the patient was much prostrated thereby, he prescribed two small spoonfuls of glycerine, to be taken night and morning. The sick man continued it one year, and has had no return of the hæmorrhoids. The next case was that of a man, 56 years of age, who suffered similarly, and was also cured by the use of glycerine. A woman who had been operated on by the thermocautery without relief, was also cured. If the glycerine nauseates, add a few drops of lemon essence.

Proceedings of Societies.

Medical Association of the State of Alabama.

This Association convened in Selma, April 8, 1879—the President, Dr. R. D. Webb, of Livingston, in the chair; Dr.

T. A. Means, of Montgomery, Secretary. Opening prayer, by Rev. Dr. Hooper, of Broad Street Presbyterian Church. Address of Welcome, by Dr. C. D. Parke.

The President's Annual Message was thoughtful and practical, treating mainly of sanitary legislation, and the necessity of State and National quarantine.

At night, the annual oration was delivered by Dr. W. G. Mitchell, of Eufaula.

During the second day, papers by regular reporters were presented. One was by Dr. J. M. Godfrey, on "Hydrophobia: Its Recent Appearance in Sumter County." This was a valuable contribution.

Dr. E. D. McDaniel read an exhaustive and interesting paper on "Artificial Respiration, and the Coma of New-Born Babies," which elicited considerable discussion, and was a most admirable and clear exposition of advanced ideas and facts bearing on this subject.

During the third day, Dr. W. D. Bizzell, of Mobile, read a first-rate paper on "Bright's Disease of the Kidneys;" Dr. T. A. Means, of Montgomery, one on "Costiveness and Constipation;" Dr. W. H. Sanders, of Mobile, one on "Errors of Refraction and Accommodation, and their Correction by Glasses;" and one by Dr. S. D. Seelye, of Montgomery, on "Mechanical Injuries of the Eye." These papers were prepared with great care, and exhibited great earnestness on the part of the authors. Interesting discussions followed the reading of each paper.

Much interest was also taken in the "Omnibus Discussion"—a debate on miscellaneous subjects brought before the Association.

During the fourth day, the report of the Board of Censors was read and adopted. This body constitutes the State Board of Health. This Board is charged, as a sort of Executive Committee of the Association, and under the direction of that body, with the execution of very important duties under the health laws of the State; and, in compliance therewith, are now thoroughly organized, and have elected as Health Officer of the State, Dr. Jerome Cochran, of Mobile. As the guardian of public health, and as the source of inspiration and instruction of the medical profession and the public on all these important questions, the Association is fulfilling a grand and glorious mission. The administration of the health laws, and even their enactment, is in the hands of the medical men of the State through the Association. The liberality of the last General Assembly of Alabama, which appropriated

\$3,000 to the State Board of Health, and the passage of an act creating a State Health Officer, show that the good work already done is bearing fruit. The following gentlemen constitute the Committee on Public Health: Drs. Jerome Cochran, of Mobile; C. D. Parke, of Selma; J. S. Weatherly, of Montgomery; C. H. H. Franklin, of Union Springs; J. B. Gaston, of Montgomery; S. D. Seelye, of Montgomery; G. A. Ketchum, of Mobile; W. H. Anderson, of Mobile; Peter Bryce, of Tuscaloosa; and M. H. Jordan, of Birmingham.

The following were elected officers for the ensuing year: President, Dr. E. P. Gaines, Mobile; Vice Presidents, Drs. W. H. Johnston, Selma; and J. W. Sears, Birmingham; Orator, Dr. Paul DeL. Baker, Eufaula. Dr. T. A. Means, of Montgomery, continues as Secretary.

Huntsville was selected as place of meeting in 1880.

Taken all in all, this was probably the most successful meeting ever held by the Association. Over one hundred doctors were in attendance from all parts of the State. The scientific and medical status of the various papers read showed that the work done was such that the Association may well be proud of.

Abingdon Academy of Medicine.

This Association held its annual meeting in the office of Dr. H. M. Grant, in Abingdon, Va., April 7, 1879. Dr. J. S. Apperson, President, in the chair.

The following gentlemen were elected officers for the ensuing year: Dr. W. F. Barr, President; Drs. Geo. E. Wiley, and T. D. Kernan, Vice Presidents; Dr. R. J. Preston, Corresponding Secretary; Dr. H. M. Grant, Recording Secretary and Treasurer.

The following gentlemen were elected Honorary Fellows: Drs. J. S. D. Cullen, R. T. Coleman, Richmond, Va.; A. M. Fauntleroy, Staunton, Va.; J. H. Claiborne, Petersburg, Va.; S. M. Bemiss, New Orleans, La.; H. F. Campbell, Augusta, Ga.; J. J. Chisolm, Baltimore, Md.; W. N. Vance, Bristol, Tenn.

The following gentlemen were elected Delegates to the American Medical Association, that convenes in Atlanta, Ga., first Tuesday in May next: Drs. W. F. Barr, George E. Wiley, J. S. Apperson. Alternates: Drs. T. S. Powell, Robert Battey and J. L. Cabell.

Dr. Apperson reported a very interesting and anomalous case in practice—*abortion without pain*, or knowledge of the patient, and without hæmorrhage; complete contraction of

the os on the cord occurred, and there was retention of the placenta for *three months* without producing any bad symptoms—the patient during the time remaining in good health.

The Fellows then engaged in the discussion of the subject selected for the occasion—Rheumatism. Drs. Wiley, Apperson, Preston and Barr, each gave their opinions, especially as to the treatment of the disease, which amounted to the recommendation of the use of cathartics, salicylic acid, quinine, alkalies and opiates; and cupping along the course of the spinal column was recommended by Dr. Barr, especially; who also remarked that he regarded colchicum useless and worthless in *true* rheumatism.

Dr. Barr reported a case of *Sciatica*, in which he had used purgatives, quinine, wet and dry cupping, and blisters over the sacrum and course of the nerve, sulphate of morphia and atropia hypodermically, with only temporary relief, but effected a cure with two hypodermic injections of chloroform into the muscle near the point where the nerve passes between the trochanter major and tuberosity of the ischium. He used a syringe full each time, and introduced it *deep* into the muscle. H. M. Grant, Cor. Secretary.

Analyses, Selections, &c.

Defibrinated Blood for Rectal Alimentation.—During the sixth stated meeting of the Therapeutical Society of New York, the Committee on Restoratives, through its Chairman, Dr. Andrew H. Smith, presented a report, a summary of which may be thus stated:

The report covers 64 cases.

Thirty-eight were of phthisis. Of these, in eight the treatment was not well borne; ten were not noticeably benefited; twenty received benefit—some of them slight, others very decided.

One case of diarrhoea in phthisical patient made worse.

Nine cases were of anæmia. Of these, one was not benefited; eight were greatly improved or cured.

Five cases were of dyspepsia. All benefited, some of them remarkably. Several apparently cured.

One case of dyspeptic asthma entirely relieved while the treatment was continued.

Four cases of exhaustion from various causes, all benefited.

Three cases of neuralgia; one not benefited, two decidedly improved.

Two cases of gastric ulcer; one not benefited, death taking place from hemorrhage; one rescued when apparently moribund.

From the facts before them, the Committee feel warranted in the following conclusions:

1. That defibrinated blood is admirably adapted for use for rectal alimentation.
2. That in doses of two to six ounces it is usually retained without any inconvenience, and is frequently so completely absorbed that very little trace of it can be discovered in the dejections.
3. That, administered in this way once or twice a day, it produces in about one-third of the cases for the first few days more or less constipation of the bowels.
4. That in a small proportion of cases the constipation persists, and even becomes more decided the longer the enemata are continued.
5. That in a very small percentage of cases irritability of the bowels attends its protracted use.
6. That it is a valuable aid to the stomach whenever the latter is inadequate to a complete nutrition of the system.
7. That its use is indicated in all cases not involving the large intestine, and requiring a tonic influence which cannot readily be obtained by remedies employed in the usual way.
8. That in favorable cases it is capable of giving an impulse to nutrition which is rarely if ever obtained from the employment of other remedies.
9. That its use is wholly unattended by danger.—*New York Med. Jour.*, April, 1879.

Book Notices, &c.

The National Dispensatory—Containing the Natural History, Chemistry, Pharmacy, Actions and Uses of Medicines, Including those Recognized in the Pharmacopœias of the United States and Great Britain. By ALFRED STILLE, M. D., LL.D., Professor of Theory and Practice of Medicine in the University of Pennsylvania, etc.; and JOHN M. MAISCH, Ph. D., Professor of Materia Medica and Botany in the Philadelphia College of Pharmacy; Secretary to the American Pharmaceutical Association, etc. Two Hundred and One Illustrations. Henry C. Lea. Philadelphia. 1879. 8vo. Pp. 1,628. Leather, Price, \$7.50. (For sale by West, Johnston & Co., Richmond.)

Pharmaceutical Notice.—From the national reputation of the authors, we had looked, with longing expectancy, for the appearance of this volume, and had pictured to ourselves a

compendium of medical and pharmaceutical knowledge, embracing the entire field of modern chemical research and physiological investigation as applied to the action of remedies. So, with more than ordinary interest, we have carefully examined its pages.

The work, in its scope, is comprehensive, embracing all drugs, chemical and pharmaceutical preparations, officinal and unofficinal, in the United States and British pharmacopœias, embellished, when necessary, by the addition of many important formulæ from the French codex and German pharmacopœia. The order of arrangement is alphabetical, which, we learn from the authors, has been adopted as more convenient for reference; but we question the expediency of any method, by which the product is investigated prior to some knowledge of the substance from whence obtained. The conspicuous characteristics of the work are the prominent headings under which its subjects are treated—all necessary matter pertaining immediately thereto being concisely and pertinently grouped, so that a mere glance gives the desired information. Accompanying the title of each article, a full synonymy is given, followed by the natural order, in the case of a member of the plant kingdom, with a full and succinct botanical treatise of the same. If a chemical, its correct symbol, according to the new nomenclature, with its molecular weight are given. Whenever necessary, as in the case of important and leading drugs, the work is illustrated, thus giving their general aspect and microscopical appearance.

Collection and Commerce.—From this caption, we get a valuable insight into the nature of the drug, and the method of its preparation for market, together with a brief account of its commercial importance.

Composition or Constituents.—Under this heading, we find the various subjects, treated accurately, in accordance with the most recent investigations, and fully up to date, in many instances, citing the author and giving the time of the experiments; a list of allied drugs, impurities, tests, *adulterations* and *substitutions*—a most important feature, by which we are enabled to readily recognize the true from the false, the valuable from its worthless adulterant—pharmaceutical uses, physiological action and medical uses.

In a volume so comprehensive, including the primary and secondary lists of the United States pharmacopœia, enriched by frequent additions from the British and German pharmacopœias and French codex, we would hardly expect to find absolute perfection, especially in the first issue of the work.

When we consider the unremitting labor and tedious research necessary to the completion of a work of this character, and the length of time consumed in its mechanical execution, we are somewhat prepared to overlook slight inaccuracies which seemingly, in several instances, have crept into the text; and whilst, in our opinion, too much prominent space is occupied in treating unimportant drugs, yet, on the whole, the work has so much of intrinsic worth that we are compelled to acknowledge it as a valuable addition to our medical literature. A conspicuous and most pleasing feature, is the practical and familiar manner in which Professor Maisch handles his subjects when describing the pharmacopœial processes. This part of the work alone makes it invaluable to the pharmacist. The volume sparkles with practical gems which years of patient research and continuous toil have gained for their possessor, and bespeaks for us the guidance of a master hand. We regret to notice some omissions in the work, but the many additions to our standard literature, and the very thorough and complete manner in which his work is done, being comprehensive without prolixity; robbed, by its very pertinence and terseness, of all ambiguity; purged of all redundant verbiage and obsolete theories, it stands to-day as a compend of pharmaceutical science—pre-eminent.

[J. W. W.]

Therapeutical Notice.—The object for which a practitioner of medicine generally consults a dispensatory is to find, in one short compass, not only the description of the article in relation to materia medica and pharmacy, but also a succinct statement of its therapeutical uses, and some reference to the prominent authors on the subject. In other words, it is a work of reference both for the apothecary and the physician. When the practitioner desires more, he goes to monographs on the subject investigated, or to extended works on therapeutics. Therefore, no one would expect an exhaustive treatise on therapeutics in a dispensatory; but the reader has a right to expect a summary of the views of the most prominent members of the profession on the subject, or, at least, a list of the diseases for which any given agent has been recommended. But we are sorry to say that the practitioner who expects to find satisfaction on either of these points in the *National Dispensatory*, will be disappointed.

It has already been said that the pharmaceutical portion is very well executed, and that the apothecary will find all that he can fairly expect in such a work. We wish we could say as much for the medical portion. Here we find the unusual combination of skepticism of the results of the clini-

cal experience of competent observers with the most decided dogmatism in the expression of the opinion of the author himself. Especially is this the case when some article is under discussion, to whose use the author has a special repugnance, and among them the whole class of arterial sedatives. Then, he certainly leaves no doubt on the mind of any reader as to his most decided antagonism. For example, when speaking of *veratrum viride*, he says: "The greater number of reports which have been published concerning the medicinal use of green hellebore are, unfortunately, not only deficient in the details on which a judgment could securely rest, but exhibit great ignorance of the natural history of disease, and of the relation of medicines to its cure. * * * Cardiac sedatives, of which the medicine under consideration is the type, tend to retain in the blood all that is injurious to it; and hellebore, at the same time, reduces the patient to a state of such wretchedness that he is unable to take food, or to digest it if he ate it, or even to find energy enough to cling to that last refuge of sufferers—hope." And so on about *tartar emetic*, *nitras potassii*, *aconite*, *gelseminum*, etc., to which articles we call the attention of the dispassionate reader.

The statement of the physiological action of the various remedies is generally good and sufficiently extended for a work of this kind, were not some of them tinctured by the same bias as is marked in referring to the articles already mentioned.

But we must entirely dissent, that any work, claiming to be "national" in its character, should contain any such extreme and partisan expressions as the following on any subject where there is such difference in the views held by prominent members of the profession as on the relative advantages of chloroform and ether. Prof. Stillé reiterates here, as he has already published in his work on "*Materia Medica and Therapeutics*," such extravagant dogmas as the following: "The number of deaths caused directly and exclusively by the administration of chloroform, independently of any error in the mode of the inhalation, or in the quality of the agent or in any unfitness of the patient, may now be counted by hundreds. They are cases of homicide, which may be called involuntary, but which even charity will not warrant us in calling accidental." Also, in another place in his article on Chloroform, folio 402: "The surgeon, therefore, who employs chloroform, takes upon himself the risk, which no necessity imposes on him, of destroying human life; that tens of thousands have escaped uninjured, cannot exonerate him in any case of fatal issue, for he knew the danger and defied

it." But, perhaps, we may think that he has some reason on his side, when we read further on that he directs that it should be administered "by means of a napkin folded in a funnel shape, and held *closely* over the nostrils and mouth during inspiration," which, strictly complied with, would certainly afford a fair chance of suffocating the patient by the abstraction of oxygen, and thereby producing a death, "which even charity would not warrant us in calling accidental."

He gives no caution as to the danger from the use of methylic chloroform from the contamination of amylie alcohol or fusel oil; nor does he state the imperative necessity of securing a sufficient quantity of atmospheric air to prevent asphyxia. In fact, any one who administers chloroform in the same way as he would ether, would produce the death of his patient—not by the action of chloroform, but by the absence of oxygen. Ether, in careless or reckless hands, is safer than chloroform, because it is less active, and contains oxygen enough to sustain life even when the atmospheric air is entirely excluded. But the Pennsylvania Hospital in Philadelphia reports four cases of death from ether; and, doubtless, numerous others have been attributed to intercurrent bronchitis or pneumonia, which were the direct effect of the ether. Were we to admit, as authoritative, the quotations above mentioned, woe betide the surgeon in a suit for malpractice, should he use chloroform; and the second quotation would infallibly condemn any surgeon who was reckless enough to attempt ovariectomy or even amputation, for he "knew the danger and defied it"—notwithstanding tens of thousands have escaped, not only without injury, but with the salvation of their own lives. And, on the same principle, opium, belladonna, arsenic, and all the active articles would be unceremoniously excluded from the *materia medica*.

We are sorry that we are compelled to dissent so decidedly from the views expressed by the author in the above quotations. In some points, the work is a decided advance on any previous book, but the extreme views expressed detract from its value. If permitted, we would suggest that, in the next edition, which we hope will soon be called for, these expressions of the Therapeutic Author should be softened down, and that more attention should be given to what has been written about the several articles, so that the reader could form *his* estimate, instead of having the mere *ex cathedra* utterances of the author. The dispensatory should be—especially when arranged in alphabetical form—a concise *statement of facts*, and the reader should be the judge of their value.—[J. S. W.]

Clinical Treatise on Diseases of the Liver. By Dr. FRIED. THEOD. FRERICHS, Professor of Clinical Medicine in the University of Berlin, etc. In three volumes. (Translated by CHARLES MURCHISON, M. D., F. R. C. P., Physician to the London Fever Hospital, etc. New York: Wm. Wood & Co. 1879. (From Publishers.) Price, \$1.25 each.

Volumes I and II of this well-known work are received. They form Nos. 3 and 4 of the annual series of "Wood's Library of Standard Medical Authors," which is sold by subscription in advance—\$12 for twelve books. The third volume of this *Clinical Treatise* will be issued during the month of May—thus completing Frerich's work on the Liver. Each of the two volumes before us contain about 230 octavo pages. This *Treatise* is chiefly valuable, because it is eminently *clinical*; and for this reason, we may recommend it to our readers, with the assurance that, by study, they will derive far more information than they could otherwise get for \$1.25 a volume. Pressure upon our space does not allow us to attempt a notice; besides, the work is favorably known among all who are acquainted with medical literature.

Transactions of the American Medical Association. Vol. XXIX. Held in Buffalo, N. Y., June 4-7, 1878. 8vo. Pp. 900. In addition, a *Prize Essay on Surgical Anatomy and History of the Common, External and Internal Carotid Arteries.* By JOHN A. WYETH, M. D., New York. Pp. 245. Illustrated. THEOPHILUS PARVIN, M. D., Indianapolis, *President*; WM. B. ATKINSON, M. D., Philadelphia, *Secretary*.

This is a magnificent volume of *Transactions*. Although issued almost a year after the papers were presented—almost at the time of the subsequent annual meeting of the Association—still the volume is of such general interest as to make it a most desirable addition to medical literature. It is a great misfortune, as we have been incidentally advised, that the edition was too small to supply the demand. Some measures should be taken to correct this misfortune in the future. A hundred or so extra sheets of each form of the volume, over and above the total number of members of the Association, exchanges, etc., might be printed and laid aside, without binding, except on demand, whenever it is feared the edition is not sufficiently large; and this might be done without very material pecuniary expense.

In our July No., 1878, we gave such extended reports of the proceedings and synopses of most of the papers read, that it is unnecessary to go over the field again; besides, space does not permit us to do so. Of special interest, however, not formerly noticed as connected with the proceedings, is the most excellent prize essay, whose title is given, in part, in the

caption. Besides what is therein stated, this prize essay gives the "surgical anatomy and history of the innominate and subclavian arteries, with an analysis of 173 dissections of the surgical regions of the neck, and a collection of 1,198 cases in which the results of deligation of these vessels are given, with other useful data."

A Manual for the Practice of Surgery. By THOMAS BRYANT, F. R. C. S., Surgeon to and Lecturer on Surgery at St. Guy's Hospital etc. With 672 Illustrations. Second Amer., from 3d Revised and Enlarged English Edition. Philadelphia: Henry C. Lea. 1879. Royal 8vo. Pp. 945. (For sale by Messrs. West, Johnston & Co., Richmond.)

This is a true *practitioner's book*. It is well planned, and is, for an English work, very complete. We wish, however, that our English, and, indeed, European authors, *on surgery especially*, would more thoroughly acquaint themselves with American practices before making their text-book publications, since, strange as it may seem, their works are used by preference as text-books in this country. There is no country which, for purely practical surgery and mechanical devices, equals America. Her surgeons are more inventive, being so often compelled to perform the gravest operation without the instruments laid down as necessary by established authority in Europe. This leads American surgeons also to be, not less careful than others in their operations, but more experimental; and this very method of study leads to the devising of new operations, etc.

Mr. Bryant, from his writings, seems to be familiar with Sayre's method of treating spinal curvatures—especially Pott's disease. But he makes no allusion to the method proposed, and so beneficially carried out by Dr. Benjamin Lee, of Philadelphia, in regard to lateral curvatures. In regard to stone in the bladder, he does not mention Bigelow's method; and in regard to inguinal hernia, etc., he does not allude to Dr. Dowell's operation—the success of which far excels that of Wood's method, or any of the other operations to which he refers. So little risk to life is there from this operation, and so generally successful is it, that were Mr. Bryant acquainted with it, he would scarcely have said that "any operation for the radical cure is unjustifiable," even though it may be *possible* to retain the hernia with a truss and the patient live in a civilized country. No reference whatever is made to Battey's operation. And thus we might go on from one operation to another that have become established in this country because of successful issues that are not even referred to by Mr. Bryant. But the complaint

which we here raise against this *Manual* applies equally to almost every European work.

Mr. Bryant is quite conservative, and this will meet with American favor. Whatever he has recommended in this book is well grounded. And the scope of this *Manual* includes as much as any of the usual text-books on surgery.

Yellow Fever. By THOS. G. SUMMERS, M. D., Professor of Anatomy and Histology in the University of Nashville and Vanderbilt University. (Copyrighted.) Nashville, Tenn.: Wheeler Bros. 1879. Cloth. 8vo. Pp. 72. Price, \$1. (From Publishers.)

This is a record of the lessons learned by the Doctor from his large experience during the memorable yellow fever epidemic of 1878. He is of opinion that the disease is zymotic in character, and not dependent upon a specific germ. It is ushered in by a train of intensified malarial influences, which gradually glide into the specific fever; and depends, for its development, upon atmospheric relations of heat and moisture. He does not think it contagious, but it is an infectious disease, which may spring up at any time in Southern latitudes, whenever atmospheric conditions are favorable.

In the clinical history of the disease, which we cannot follow for want of space, we find a very useful and accurate diagnostic table between yellow and malarial fever.

In regard to treatment, quinine, in most cases, is not only not beneficial, but often disastrous, except as a tonic in the convalescent stage. The line of treatment thus far found most serviceable is symptomatic rather than empirical. Cold bathing throughout the febrile stage, as carried out by Prof. Choppin, is thought to be *the* remedy.

"The best of all prophylactics, is to remove from the infected districts." This recommendation in the present state of our knowledge, is undoubtedly the wisest that can be popularized. Let our local, State and national authorities, instead of expending mints of money for disinfectants, drugs, provision, clothing, doctors, nurses, undertakers, etc.—let them adopt the more economical and far more sanitary course of completely emptying towns of their citizens for the time being. Where there are no persons to be attacked by yellow fever, there can be no fatal spread of the disease. Dr. Summers maintains, with apparently strong ground for his opinions, that "a general quarantine is utterly preposterous," and all of us know that a *perfect* general quarantine is impossible. This view was ably presented by the paper of Dr. Burroughs in the March number, to which readers of the MONTHLY are especially referred.

Chemistry: General, Medical and Pharmaceutical, including the Chemistry of the U. S. Pharmacopœia. By JOHN ATT-FIELD, M. A., and Ph. D., Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain, etc. 8th Edition, Revised by the Author. Philadelphia: Henry C. Lea. 1879. 12mo. Pp. 697. Leather. (For sale by Messrs. West, Johnston & Co., Richmond.)

Medical Chemistry, including the Outlines of Organic and Physiological Chemistry. By C. GILBERT WHEELER, Professor of Chemistry in the University of Chicago, etc. Philadelphia: Lindsay & Blakiston. 1879. 12mo. Pp. 424. Cloth. Price, \$2. (From Publishers.)

We here call attention of medical men, for their special purposes, to the two best chemical publications that are now in print. Dr. Attfield's book was first issued in 1867, and the fact that in the brief space of twelve years eight large editions have been required, attests the value placed upon it in Europe and America. Each of these editions has been a decided improvement on its predecessor, until now the present edition is as perfect as one could well expect a book of this kind to be. It possesses the advantage over other chemical works intended specially for medical students, of being also quite complete as a *general* chemical text-book. It is even more particularly serviceable to pharmaceutical students and apothecaries, as it "includes the whole of the chemistry of the U. S. Pharmacopœia, of the British Pharmacopœia, and of the Pharmacopœia of India." Much new matter has been incorporated in the present edition.

Mr. Wheeler's Chemistry has a more limited scope, but in this limited field, it is a most useful book to the *practitioner* of medicine. It is assumed that the readers of this work are familiar with the general principles of modern chemical philosophy. The plan adopted has been based, in part, upon Riche's *Manuel de Chême*. Limited, as it is, to a consideration of those agents or substances with which the medical man should be more particularly familiar, this work is more ample in its details on these points than any other easily accessible book in this country.

The two works included under this notice are most desirable companions—the one of the other.

Principles and Practice of Gynæcology. By THOMAS ADDIS EMMET, M. D., Surgeon to the Woman's Hospital of the State of New York, etc. With 130 Illustrations. Philadelphia: Henry C. Lea, 1879. 8vo. Pp. 855. Leather. (For sale by Messrs. West, Johnston & Co., Richmond.)

We have examined this book with something more than ordinary care, and now lay it aside captivated by our impressions of it. From first to last, each page grows in interest,

and one is struck with the practical tone of all that is said. It is indeed *the* gynæcological work for the practitioner. Its equal is not yet published, or, at least, we have not seen it.

Even though crowded for space, the importance of the work, and also that we may illustrate its completeness, make it proper that we should at least name the table of contents.

Chapter I is on the relations of climate, education and social conditions to development. "To reach the highest point of physical development, the young girl in the better classes of society should pass the year before puberty and some two years afterwards free from all exciting influences. She should be kept a child as long as possible, and made to associate with children." Sounder doctrine as to the physical culture of the female sex is nowhere so forcibly impressed. Unfortunately, neither parents nor children of the present day are willing to heed this advice, and generally do not believe in this teaching until the lesson has been impressed by broken down health.

Chapters II and III describe the instruments proper for examinations, operations and dressings or appliances.

Chapter IV gives a form for record of cases; mode of examination; chief points for forming diagnoses.

Chapter V is on the causes of disease.

Chapters VI, VII and VIII relate to the principles of treatment.

Chapter IX is on ovulation and menstruation.

Chapter X is devoted to abnormal changes in the menstrual flow, vicarious menstruation and hysteria.

Chapter XI speaks of congenital absence and accidental atresia of the vagina; mode of operating for establishing the canal and evacuating retained menstrual blood.

Chapter XII is on pelvic hæmatocele; and Chapter XIII is on pelvic cellulitis.

Chapters XIV, XV, XVII, XVIII and XIX consider displacements of the womb, while Chapter XVI is devoted to pessaries.

Chapter XX is on lacerations of the perineum.

Chapter XXI is on inversion of the uterus.

Chapters XXIII and XXIV are on laceration of the cervix uteri.

Chapter XXV describes amputation of the cervix uteri.

Chapter XXVI is on cancer of the pelvic organs.

Three next chapters are on fibrous growths of the uterus.

Chapter XXX is on diseases of the external organs, cervix and uterine canal—such as elephantiasis and hypertrophy of the labiæ and clitoris, tumors and cysts, vaginismus, etc.

The three succeeding chapters are on the various vaginal fistulae.

Chapter XXXIV is on diseases of the urethra.

Chapter XXXV is on stone in the bladder and ureters.

Chapter XXXIX considers the contents of abdominal tumors and ascitic fluid in relation to points of diagnosis—a most valuable chapter.

The remaining seven chapters are on diseases of the ovaries, ovariectomy, etc.

This table, in general, shows the scope of the work. Since our limits forbid anything like an analytical examination of any of the various chapters, and although there are a few omissions of practical recommendations that have been made by other writers, still we cannot send this notice forward without reiterating that, in our estimation, "Emmet's Principles and Practice of Gynecology" is undoubtedly the best book for the student, as well as general practitioner, which is at present published.

Editorial.

A Novelty in Society Organization.—The Baltimore Academy of Medicine, in its organization two years since, adopted a new by-law, in addition to the usual society regulations, which has worked well with them, and may, with advantage, be introduced in some of the medical organizations of large cities. The medical societies of Baltimore are numerous, but were very badly attended by the older and experienced men in the profession, and their management was left pretty much to more recent graduates. No appeal seemed to have any weight in inducing the old members to attend. They paid their annual subscription; kept their names on the roll, but seldom showed their faces in the society halls. Two years since, an effort was made to induce the older members of the profession in Baltimore to resume active membership, and this effort has been successfully carried out in this novel way. In organizing the Baltimore Academy of Medicine, beside the adoption of the Code of Ethics of the American Medical Association, etc., a clause was introduced, requiring *at least ten years' experience in the practice of medicine to secure eligibility to membership*. On this foundation, the Academy has been a success from its first evening of meeting. Its rolls exhibit the names of nearly every old and good physician in Baltimore. The bi-weekly attendance is full; and from this

body of experienced, observing and reading professional men, very interesting discussions are had. At every meeting, the leading men in the profession can be found in the rooms, and the Baltimore Academy of Medicine has become one of the leading medical societies of the country. Although the ten-year clause, by excluding the young men, gave outspoken offence, all the local societies have commenced to enjoy the fruits of this more experienced body; and the growing disposition of the leading men in the profession to attend other societies than their own exclusive one, is seen more and more every day.

The Academy has just entered its third year of active and very successful life. The officers for the ensuing year are Dr. J. R. Ward, President; Dr. H. P. C. Wilson, Vice-President; Dr. B. B. Browne, Recording Secretary; Dr. E. Cordell, Reporting Secretary; Dr. S. Chew Van Bibber, Treasurer. Dr. J. J. Chisolm is chairman of the Executive Committee, with Drs. P. C. Williams and A. Arnold as colleagues.

The Sanitary Protection Association of Newport, Rhode Island.

It could hardly have been thought possible that, with all the attention that has been paid to sanitary matters by public authorities and private practitioners, the simplest and most efficient plan for the widest, as well as for more limited work, should have remained unsuggested, both in this country and abroad, until the present moment; and yet such seems to have been the case. To Prof. Fleeming Jenkin, of the University of Edinburgh, is due the credit of having conceived the new system, only last year. (*Edinburgh Medical Journal*, April, 1878, p. 865.) Introduced into this country by a Boston physician now resident at Newport, R. I., Dr. Horatio R. Storer, who, for twenty-five years, has done much, and has, in many ways, tried to impress upon the American profession the influence of Scotland, sanitary protection has already become effective in Newport, and is exciting much attention elsewhere.

“Sanitary protection” means simply the precaution and cure of disease through private organizations of citizens for the inspection and continued care of their own dwellings by skilled experts, the expense of employing whom is thus reduced to a comparative trifle in the case of each individual member of the Association. The principle involved is partially that of the mutual benefit and mutual insurance societies—certain of the members being annually chosen, by the whole number, to act as a business council, to whom the re-

ports of the inspecting engineer and the water analyst are made. The plan itself is simple, practical, efficient and comprehensive, and we hope eventually to see it adopted in every city. It is equally needed by the most crowded towns and smallest villages, and there is not a single medical man anywhere who would not be doing a good work by identifying himself with an organization of the kind among his patients. We refer our readers to a paper upon the subject in the March number of the New York *Sanitarian*, by the corresponding secretary of the Newport Association, Dr. Storer, the Council of which, as directed by its constitution, are endeavoring "to assist in the general establishment of sanitary protection."

Yellow Fever Honor Roll.—Dr. James D. Burch, of Yazoo City, Miss., has carefully compiled a list of the physicians who died in the South in 1878 during the prevalence of the yellow fever. A perfect roll of these physicians should be printed in the transactions of some Southern State Society for preservation. We heartily approve of the suggestion which Dr. Burch makes in regard to the erection of a monument at Memphis to the memory of those members of the profession who died in their efforts to serve their fellows.

Correction.—Page 70, April No. In regard to the lighter colored fluid found in the cystic tumors on the neck of a child, it should have been stated that this *pale* fluid contained much cholesterin and many "granular cells." It did not coagulate. The *darker* fluid contained a little cholesterin, but no "granular cells." It coagulated firmly and spontaneously.

We make the above correction with pleasure, upon the authority of a personal letter from Dr. Christopher Johnston, of Baltimore, because of the importance of the observation.

The National Board of Health will convene in special session at Atlanta, Ga., May 5th, and continue in session contemporaneously with the American Medical Association. The importance of an early interchange of views and the absolute necessity for consultation with health officers, quarantine physicians and sanitarians generally throughout the United States, has led the Board to urge upon all persons interested in matters of sanitation, whether municipal, State or National, to be present and counsel with the Board. Every municipality in the whole country should be represented, in order to determine what steps should be taken towards securing a general system of Health and Quarantine Regulations,

and that by such a gathering of prominent sanitarians of the United States the interests of all sections may be promoted.

The Georgia Medical Association, during its recent session in Rome in April, selected Augusta as the place of meeting in 1880; and elected Dr. Joseph A. Eve, of Augusta, President for the current year. A better selection could not have been made for this important office—a practitioner of eminence, a man of usefulness, and an indefatigable student and worker. At the meeting of the American Gynæcological Society in New York, he was said to be the oldest teacher of obstetrics in the United States—having been elected Professor of Obstetrics and Diseases of Woman and Children in the medical department of University of Georgia in 1839, which position he has held to the present time.

American Medical Association—We are requested to say that delegates to the American Medical Association, which meets in Atlanta, May 6th, the *families* of delegates *and all others* who propose attending from Virginia or District of Columbia, can procure on May 4th and May 5th, *round-trip tickets via Kennesaw route*, good until May 20th, at the following rates: From Washington, D. C., \$27.75; from Alexandria, Va., \$27.50; from Charlottesville, \$25.85; from Norfolk, \$25; from Richmond or Petersburg, \$24.65; from Lynchburg, \$23.25. Pullman Sleepers will be on this train, from Washington or Lynchburg, without change. The following schedule is in effect: Leave Washington (Va. Midland R. R.), 7 A. M.; leave Charlottesville (Va. Midland R. R.), 11:55 A. M.; leave Norfolk (A., M. & O. R. R.), 6:25 A. M.; leave Richmond (R. & P.), 7:54 A. M.; leave Petersburg (A., M. & O.), 9:30 A. M.; leave Lynchburg (A., M. & O.), 2:55 P. M.; leave Knoxville, 4:14 A. M.; leave Dalton, 9.06 A. M. Arrive in Atlanta (following day), 12:55 P. M.

The National Dispensatory, recently issued, is so important a publication, that we have spared more space than usual for its notice in the appropriate department of this number. In order that the notice might be authoritative, we persuaded Mr. Joseph W. Willis, one of the most competent pharmacists in our State, to notice the Pharmaceutical Department; and Prof. J. S. Wellford, M. D., of the Medical College of Virginia, to write up the Therapeutical Department. They have had the kindness to be faithful to their tasks.

Sixth Decennial Pharmacopœia Convention —Dr. James E. Morgan, No. 905 E Street Northwest, Washington, D. C., as

the last surviving officer of the Pharmacopœia Convention of 1870, call a General Convention to meet in Washington, D. C., on the first Wednesday in May, 1880, for the purpose of revising the Pharmacopœia of the United States. For the information and guidance of all parties interested, he refers them to the rules adopted by the Convention of 1870, to be found on page 11 of the Pharmacopœia of the United States, and requests compliance with the intention of the said rules.

Laryngology.—Dr. Louis Elsberg, 614 Fifth Avenue, New York, wishes the titles and publications of everything on the Throat, Voice, etc., as he is preparing a report of what has been published in this country on the subjects. No matter how unimportant the article or publication may seem, mention it in replying to his request.

The North Carolina Board of Medical Examiners will meet in Greensboro, on Monday, May 19th—the day in advance of the session of the State Medical Society—for the purpose of examining candidates for practice of medicine, surgery, etc., in the State of North Carolina. No one can practice medicine, or “any of the branches thereof,” for fee or reward, who does not pass suitable examinations before this Board. We hope the standard of qualifications will be kept high in order that other States may soon recognize the special qualifications of North Carolina practitioners as compared with the rank and file of the profession in Virginia and other bordering States, and thus lead to reform where it is mostly needed. This Board can do more than all the journals combined in their attacks upon colleges, etc. Dr. Peter E. Hines, of Raleigh, is President; Dr. Henry T. Bahnson, of Salem, N. C., Secretary.

North Carolina State Board of Health.—We learn, with great pleasure, from the March No., 1879, of the *North Carolina Medical Journal* that the General Assembly of that State made some new provisions for the support of the State Board of Health, which will make it more effective. The first bill (passed two years ago) granted insufficient authority, and allowed only \$100 a year. The present law, while not all that could be desired, yet is as much as could be secured by indefatigable workers, and gives hope of future improvement. We have not been definitely informed as to the exact changes in the law which makes our *confrère* so happy. Six members are to be elected at the approaching session of the State Society in Greensboro.

Medical and Chirurgical Faculty of Maryland.—At its recent session, the following officers were elected for the ensuing year: Dr. S. C. Chew, President; Drs. H. P. C. Wilson and James H. Stuart, Vice-Presidents; Dr. W. G. Register (Baltimore), Secretary; Drs. G. L. Taneyhill and Edwin Michael, Assistant Secretaries; Dr. Gilman, Treasurer; Drs. P. C. Williams, J. C. Thomas, Christopher Johnston, L. McLane Tiffany and Gill, Executive Committee.

Dr. A. D. Rockwell's Lectures on Electricity, as they have appeared in the *Medical Monthly*, we are glad to learn, are being published in book form by Messrs. Wm. Wood & Co., New York.

Queries and Answers.

[We adopt the suggestion of some friends in making this department for the benefit of our subscribers. Every question asked in this department and answers made, should be as concise as possible.]

Pride of China.—Does Pride of China [*Melia Azedarach*], used in overdoses in children or babes, and continued for some time, produce any effect upon the brain, or otherwise cause partial loss of speech?—*Dr. L. G. Hardman, Harmony Grove, Ga.* — Azedarach is acro-narcotic, causing, in overdoses, among its effects on the nervous system, "faintness, confusion of mind, giddiness of sight and vomiting;" sometimes, "stupor, dilated pupils, stertorous breathing, and subsultus" and again, "convulsions, grinding of teeth, cold sweat, etc." "Its poisonous effects are said to be most conspicuous in the spring, when the sap is ascending."—(*Stillé's Therap. and Mat. Med.*) All authorities concur that its poisonous action is like that of *spigelia*, which, according to Bartholow (*Mat. Med. and Therap.*), in large doses, produces "cerebral effects, vertigo, dimness of vision, dilated pupils, convulsions and insensibility." Probably Bartholow accounts for the symptoms mentioned in saying, "Many of the serious symptoms supposed to have been produced by it in certain cases, were probably due to pre-existing cerebral lesions. Cases of basilar meningitis, for example, have not unfrequently been confounded with worm fever. Any vermifuge, given under these circumstances, might seem to have caused the head symptoms which are characteristic of the brain lesions."

Obituary Record.

Dr. John M. Woodworth, Surgeon-General U. S. Marine Hospital Service, died at his home in Washington, D. C., March 14th, 1879, aged 41 years. Since the time of his connection with the Marine Hospital Service especially (in 1871), up to the day of his brief fatal illness, he has done much to advance the cause of sanitation in this country. He established the system of weekly mortuary reports throughout the country, which were of such special service during the recent yellow fever epidemic.

Dr. George B. Wood died at his home in Philadelphia, Pa., March 30th, 1879, aged 82 years. He was born in New Jersey in 1797. As one of the authors of the "Dispensatory of the United States;" also *Work on Practice*; also another on *Pharmacology and Therapeutics*; and also as a Professor for many years in the Medical Department of the University of Pennsylvania, he had gained a well-deserved, world-wide reputation.

Among his bequests was one of \$75,000 to the University Hospital in Philadelphia to endow a special ward—to be known as the "Peter Hugu Ward"—named after his father-in-law.

Dr. Isaac Hays, Editor-in-chief of *American Journal of Medical Sciences* for about a half century, died at his home in Philadelphia, Pa., on April 12th, 1879. He edited the best journal ever published in America or Europe; and although for some years past failing health compelled him to take a less active part in conducting that journal, still his influence is so felt by those who were associated with him, that it gives promise of continuing in the rôle in which he placed it.

Dr. Thomas Withers died at his home in Petersburg, Va., April 6th, 1879, in his seventy-first year. He graduated in medicine at the University of Virginia in 1834. He moved to Greensboro, Ala., in 1844, but returned to Virginia and settled in Petersburg in 1848, where he resided until his death. He was a member of the American Medical Association and of the Medical Society of Virginia; and on several occasions occupied positions of trust in his community.

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Original Communications.

ART. I.—Organic Forms in their Relation to Systemic Disease.

I. Fermentation. By RICHARD H. LEMMON, M. D., Instructor in Microscopy and Practical Histology, University of Virginia.

The subject of this paper, difficult as it is even to men of exceptional knowledge and capacity, has yet two conspicuous advantages: Its limits are marked with tolerable distinctness, and the area these limits enclose is not too wide to be fairly taken in by any mind of average capacity. Let us, in the beginning, clearly define those limits, to the end that a proper knowledge of the subject, and the conclusions derivable therefrom, may be presented to the reader in a readily appreciable form. To further this resolve, I shall endeavor, as far as possible, not to entangle him in the numberless discussions—many of them idle and bootless—which form so large a part of the literature which has been accumulated on this subject, but to confine myself to those facts which I believe have a direct bearing on the question at the head of this page.

The subject will be treated under the following headings: I. *Fermentation*. II. *The Germ Theory*. III. *The Theory of Contagium Vivum*. IV. *Conclusions*.

I. FERMENTATION.—In discussing the question of fermentation, it will be interesting, first to give a brief *historical summary* of the various ideas which have been entertained from

an early time concerning it; for other details of the history of the subject, I refer to the excellent work of P. Schützenberger, from which I shall several times have occasion to borrow.

The word "ferment," in the form of its antecedent *fermentum*, was in common use for the expression of the idea it now conveys, before the Christian era. It is used familiarly by Virgil (*Georg.*, 3, 380); by Pliny (18, 11, 26; 18, 7, 12); also by Celsus (2, 24; 30). It is derived from the word *fervere*, to boil; and was so called from the phenomenon of the escape of CO_2 during the alcoholic fermentation. The leaven mentioned in the Bible (*Exodus* xii, 15; *Lev.* ii, 11) was nothing more than dough, which had been exposed to the air until decomposition had commenced, brought about probably by the yeast plant, whose germs were caught from the atmosphere. The wine made by Noah, after the flood, the palm wine of the Egyptians, and the hydromel, or mead, of the North Germans, were all examples of alcoholic fermentation. Nothing was known of the nature of the process, however, until very modern times. Petrus Bonus, of Ferrara (1330), writes about it as follows: "*De primo modo dicimus, quod sicut fermentum pastæ vincit pastam et ad se convertet semper, sic et lapis, ad se metalla reliqua. Et sicut una pars fermenti pastæ habet convertere partis pastæ et non converti, sic et hic lapis habet convertere plurimas partis metallorum ad se, et non converti.*" The writer is characterizing the philosopher's stone in terms descriptive of fermentative peculiarities; he is evidently struck with the small amount of leaven required to change into itself a large amount of dough. St. Paul, in his letter to the Corinthians, refers to the same peculiarity: "Know ye not that a little leaven leaveneth the whole lump?" In his "Triumphal Chariot of Antimony," Basil Valentine explains the process by saying that the yeast employed in beer-making causes in the fluid an inflammation which results in putrefaction of the liquid, and a separation of the clear parts from those which are troubled; thus he considers the alcohol to have existed all the time in the fluid, and supposes the yeast to have separated it in some mechanical manner not understood.

In the latter part of the 17th century, Willis and Stahl promulgated the view afterwards so strongly upheld by Liebig. They characterized a ferment as a body endowed with a motion peculiar to itself, which motion is transmitted to the fermentable matter. Stahl also considered alcoholic fermentation to be a phenomenon of the same class as putrefaction. Later on, Berzelius and Meitscherlich explained fermentation by saying that it was caused by "catalysis." Chemists had long known that various substances existed, which, when brought in contact with certain other substances, have the power of setting on foot in the latter reactions which result in their decomposition and the formation of new bodies, without themselves undergoing appreciable change. The chemists above alluded to said the agent acted by catalysis (*καταλυσίς*, destruction); but it is obvious that this explained nothing. We see, then, that up to the 19th century almost nothing had been learned on the subject of fermentation.

Let us now discuss the question as interpreted in modern times. *Alcoholic fermentation* will first be considered, as it is a part of the subject which has been most studied; it will also serve as a type to study other phenomena of this order. Pasteur (*Annales de Chimie et Physique*, 3d series, vol. lviii, p. 323) calls by the name of alcoholic fermentation that which sugar undergoes under the influence of the ferment known as yeast, or barm. Adopting his definition, we will consider—1st. The ferment. 2dly. The fermentable body; and 3dly. The action of the ferment on the fermentable body.

I. OF THE FERMENT.—In 1680, Leurvenhoeck, the greatest microscopist the world has ever known, by means of a simple lens, discovered that beer yeast was composed of numerous minute globules. He did not, however, determine their nature. To Caquiard de Latour (1830) is due the credit of discovering most that was known of ferments until the time of Pasteur. The former, by studying beer yeast under the microscope, made the following observations: "He found the yeast to consist of a mass of organic globules, which reproduced themselves by budding; he also noticed that these globules belonged to the vegetable kingdom, and were not

something chemical, as had been supposed; he concluded finally that it was through some effect of their vegetation that these little globules disengaged CO_2 from the saccharine fluid, and converted the latter into spirituous liquor." Schwann (*Poggén Ann.*, 1837, vol. 41, p. 184) and Kützing (*Journ. für Prakt. Chem.*, 2, p. 385) made the same discovery a little later, and independently of each other.

This new form of life was first improperly placed in the genus *Torulaceæ*; it is a tree fungus, and may, under certain conditions, be made to reproduce from spores. Meyen, who properly considered yeast a fungus, created a new genus for it under the name of *Saccharomyces*.

Following Latour, Pasteur thus extends his views concerning alcoholic fermentation: "The chemical act of fermentation is essentially a correlative phenomenon of a vital act, beginning and ending with it." "I think," he says, "there is never any alcoholic fermentation without there being, at the same time, organization, development, multiplication of globules, or the continued consecutive life of globules already formed."

Liebig for a long time endeavored to refute the theory, though he adopted the facts which led to it. Following Stahl and Willis, he maintained that the cause of fermentation is the internal molecular motion which a body, in the course of decomposition, communicates to other matter in which the elements are connected by a very feeble affinity. (Liebig, *Ann. de Chimie et de Physique*, 2d series, vol. 7, p. 178).

In conclusion, we will sum up with Schützenberger (*Fermentation*, p. 43): "No one doubts that in organic, living cells, whether they be isolated like those of yeast, or form an integral part of a more complicated organism, there resides a special force, capable of producing chemical reactions, under conditions quite different from those which we employ in our laboratories, and to produce results of the same class. This force, which we imagine to be 'as material as heat, reveals to us its activity, by decomposition effected on complex molecules.'"

Several species of the genus *Saccharomyces* are used for the production of alcoholic fermentation. The most common

are *Saccharomyces cerevisiæ* (formerly miscalled *Torula ccrevisiæ*); *S. ellipsoideus*; *S. exigans*, and *S. apiculatus*.

The first is the most common, and may be thus described: The cells of the *S. cerevisiæ* are between $\frac{1}{3200}$ and $\frac{1}{2800}$ of an inch in diameter, are more or less oval, and consist of an envelope of colorless formed material, and an inner germinal matter, also colorless, and granular if the cell has arrived at a certain stage of development. Within the germinal matter may be seen several vacuoles, said by some to contain a fluid. These cells multiply by budding—under special conditions by spores. In the field of the microscope, I have noticed them single, united two by two, and occasionally in a single chain consisting of three or four elements.

II. OF THE FERMENTABLE BODY.—Let us now speak of those bodies which, when brought into contact with the above ferments, split up under certain conditions into alcohol and CO_2 . They may be divided into three classes.

(1) Those saccharine hydro-carbons, which are regarded as aldehydes of the saturated alcohols, $\text{C}_6 \text{H}_{14} \text{O}_6$; they are expressed by the formula $\text{C}_6 \text{H}_{12} \text{O}_6$. Glucose, lactose and maltose are examples of this class; these are split up into alcohol and carbonic acid without undergoing any previous change, thus: $\text{C}_6 \text{H}_{12} \text{O}_6 = 2 \text{CO}_2 + 2 \text{C}_2 \text{H}_6 \text{O}$.

(2) The diglucosic alcohols, whose formula is as follows: $\text{C}_{12} \text{H}_{22} \text{O}_{11}$. They are cane sugar, paracarbarose, melitose, melesitose, mycose and lactine, etc. Fermentation can only be set up in this class after the hydration of any of its members. This hydration converts them into class. Thus: $\text{C}_{12} \text{H}_{22} \text{O}_{11} + \text{H}_2 \text{O} = \text{C}_6 \text{H}_{12} \text{O}_6 + \text{C}_6 \text{H}_{12} \text{O}_6$. (Cane sugar, etc. + water = dextro-glucose and lævulose.)

Thus hydration is effected by water only, or by acids, light, and the lower cellular plants. Mitscherlich (*Ann. de Poggen*, Vol. 135, p. 95) has discovered that when subjected to examination with the polariscope, the rotatory* power of a solution of glucose diminishes in proportion to the quantity of alcohol produced. Dulong has found that when equal

*The specific rotatory power of an optically active substance, is measured by the number of degrees through which 1 decimetre thick of a solution containing 1 gramme of the substance, would rotate the plane of polarization, supposing the specific gravity of the solution to be = 1.

quantities of glucose and levulose are subjected to the fermentative process, the glucose disappears before the levulose, which last of all undergoes decomposition. This phenomenon is called "elective fermentation."

(3) Finally, the oxygen ethers or anhydrides of the polyglucosic alcohols are also fermentable after hydration. Starch, cellulose, etc., which belong to this class, are converted into glucose, and then may undergo the ordinary alcoholic fermentation. The change into sugar, whether accomplished by dilute acids or the lower cellular plants, takes place independently of the oxygen of the air, and is unaccompanied by any secondary products; the acid or plant takes no direct part in the re-action; it may, if not volatile, be all measured, without loss, after the experiment. The whole reaction lies between the starch and the elements of water—a fixation of the latter occurring in the new product, as will be seen by the following formula: $C_{18} H_{30} O_{15} + H_2 O = C_6 H_{12} O_6 + 2 C_6 H_{10} O_5$ (Starch + water = glucose + 2 pts. dextrine.) On the further action of the dilute acid, the dextrine is also changed into glucose. Yeast not only has the power of converting the glucose group into alcohol and CO_2 , but also it can convert classes (2) and (3) into glucose.

III. CONCERNING THE ACTION OF THE FERMENT ON THE FERMENTABLE BODY.—We have seen that the contact of the *saccharomyces cerevisiæ*, or any of its family with the fermentable bodies just treated, under certain conditions causes the latter to split up into alcohol and carbon dioxide. This does not describe the whole of the decomposition. Pasteur (*Ann. Chimie et de Physique*, 3d series, vol. 58, p. 330), by a very conclusive series of experiments, irrefutably proves the following points: (1) That in every alcoholic fermentation, besides the principal products, alcohol and CO_2 , glycerine and succinic acid are formed. (2) That these latter are also produced at the expense of the elements of the sugar—the ferment taking no part in it. (3) That besides this, the sugar yields a certain portion of its substance to the new ferment which is developed. These facts well preface the following classical analysis. One hundred parts of cane sugar (equiv-

alent, after hydration, to 105.36 parts of grape sugar) is converted into the following:

Alcohol,	51.11	
Carbon dioxide,	{ 48.89	According to Gayhussac's equation.
	{ 0.53	Excess over " "
Succinic acid,	0.67	
Glycerine,	3.16	
Matter united with ferments,	1.00	
	<hr/>	
	105.36	

From this analysis, we gather that 95 parts of the cane sugar are split up into alcohol and CO_2 ; four parts are changed into glycerine and succinic acid; and one part is assimilated by the additional globules of yeast, which have been formed.

Monoyer thus explains the production of glycerine and succinic acid: $4(\text{C}_{12}\text{H}_{22}\text{O}_{11} + \text{H}_2\text{O}) = 2(\text{C}_4\text{H}_6\text{O}_4) + 12(\text{C}_3\text{H}_8\text{O}_3) + 4(\text{CO}_2) + \text{O}_2$ —i. e., four parts of hydrated cane sugar are split up into two parts of succinic acid, twelve of glycerine, four of carbon dioxide, and two of free oxygen. From the above, I think we may conclude that this is what happens during alcoholic fermentation: The saccharine solution penetrates, by osmosis, into the interior of the yeast cells, and each tiny globule, acting like a miniature analyst in its microscopic laboratory, and fulfilling special conditions which their prototypes, as yet, know nothing of, subdivide the complex molecule of glucose into alcohol, carbon dioxide, glycerine and succinic acid.

We see from the formula of Monoyer, that free oxygen is one of the products of the fermentation. This is reasonably supposed to serve for the respiration of the yeast cells. Pasteur supposes that the abstraction of this free oxygen from the glucose by the yeast cells, is the determining cause of the whole proceeding. Indeed, he goes so far as to aver that all fermentation is the consequence of the respiration of low forms of life—the ferment abstracting oxygen from the fermentable body which it requires for its maintenance, and by this abstraction, breaking up the molecule into several by products for which it has no use. This hypothesis, I think, could only be maintained by supposing that glucose solutions have a power of entering the yeast cells, which free oxygen

has not at all, or in a less degree; else, why should the cells deoxidize a compound, in preference to using free atmospheric oxygen?

M. Dumas has calculated that it requires 400,000,000,000 of cells to decompose one gramme of sugar in one hour; he also shows that, by increasing the number of cells, there will be a proportional diminution in the time. This, I think, further proves the process to be a biological one, having its origin in the necessity of each individual cell for assimilating a definite amount of certain elements of the sugar molecule.

We have given so much time to alcoholic fermentation, that a bare mention of the other special fermentations must suffice.

LACTIC ACID FERMENTATION.—This refers to the transformation into lactic acid of the glucose group; the souring of milk is a familiar example. The special ferment producing the decomposition was first observed by Remak (1848); it was afterwards more particularly studied by Pasteur, who described it as appearing in the form of elongated globules, much smaller than yeast cells. These globules were connected, end to end, thus forming minute jointed rods. Lister has shown that the *bacterium lactis* is the ordinary, but not sole, cause of the souring of milk. The decomposition is thus represented: $C_6 H_{12} O_6 = 2 C_3 H_6 O_3$. (Glucose=lactic acid—one molecule of glucose being divided into two of lactic acid.)

MANNITIC FERMENTATION.—It had long been known that certain natural saccharine juices would, on exposure, become changed into a viscous, gummy substance. Peligot (*Traité de Chimie de Dumas*, vol. VI) discovered that this was a fermentation dependent upon certain organic cells, which bore the same relation to the process as did the yeast cells to the alcoholic fermentation. The mannitic ferment causes the following decomposition: $25 (C_{12} H_{22} O_{11})$ cane sugar + $25 (H_2O)$ water = $12 (C_{12} H_{20} O_{10})$ gum + $24 (C_6 H_{14} O_6)$ mannite + $12 (CO_2)$ carbon dioxide + $12 (H_2O)$ water.

AMMONIACAL FERMENTATION.—In the decomposition of urine, we have an every day example of the above. The action is as follows: A special ferment, torulaceous in charac-

ter, first causes hydration of the urea, and then divides it into ammonia and carbon dioxide, thus: $(\text{CH}_4 \text{ N}_2 \text{ O}) + \text{H}_2\text{O} = 2 \text{ NH}_3 + \text{CO}_2$. According to Müller and Pasteur, the globules of the ferment are only .0000078 inch in diameter. In other respects they resemble those of beer yeast.

ACETIC FERMENTATION.—Every one knows that on the exposure of alcoholic liquors to the air, they will *generally* become sour. On testing, acetic acid will be found in the place of alcohol. The formula, $\text{C}_2\text{H}_6\text{O} + \text{O}_2 = \text{H}_2\text{O} + \text{C}_2\text{H}_4\text{O}_2$ (alcohol + oxygen = water + acetic acid), represents the reaction—the oxygen of the air being used. Exposure, however, does *not always* produce the change, which shows that the atmosphere is not the sole cause. Pasteur has shown that the oxidation of the alcohol is caused by the intervention of the cryptogamic plant, the *mycodernia aceti*. He supposes that the cells of this plant condense the oxygen like spongy platinum does, and in this way renders it capable of acting on the alcohol. Recent experimenters have shown this action to be biological rather than physical; for by destroying the life of the plant, without in any way changing the structure, the oxidation at once ceases.

BUTYRIC FERMENTATION.—This refers to the decomposition of certain substances, with butyric acid as one of the resultants. Matter capable of undergoing the alcoholic and lactic fermentations, albuminoid substances, and many vegetable acids, are susceptible of this butyric acid change. Certain species of vibrios act as ferments; they are thus described by Pasteur: “The *fermentum butyricum* is composed of cylindrical rods, straight and rounded at the extremities—diameter = $\frac{2}{1000}$ mm., length between $\frac{2}{1000}$ and $\frac{20}{1000}$ mm. They are seen either isolated or joined, end to end, in groups of three and four; they multiply by fission, and are capable of independent motion.

PUTREFACTION.—Let us now speak of *putrefaction*, to us the most important example of fermentative action. The process of putrefaction was formerly explained by the molecular transmission of chemical force. Oxygen, it was thought, initiated the action, and the motion passed like a wave through the putrescible body, causing its decomposition. The light that was

thrown upon fermentative phenomena by the brilliant discoveries of Pasteur, quickly illuminated the path to the study of all its special manifestations; and Helmholtz (*Prakt. Chem.*, 31, p. 429) first proved that bodies subject to putrefaction, might be preserved indefinitely by being heated to a certain temperature, and sealed up in a vessel whose atmosphere had been subjected to a red heat. This experiment clearly proved that the atmosphere was in some way necessary to putrefactive changes.

Surgeons were quite ready to accept this idea, for they had long known that internal injuries, such as simple fracture, etc., would heal much more quickly, and with far less danger of that dread disease, septicæmia, than would injuries much less extensive, which are exposed to the contact of the atmosphere. Helmholtz further noticed, that the bodies which he had succeeded in preserving from putrefaction, never contained infusoria or mildews; he had previously convinced himself that putrefying bodies invariably contained them. From this, the theory that infusoria or mildews were the cause of putrefaction was natural, and especially probable when taken in connection with the facts made known so recently by Pasteur concerning the other fermentations. The opponents of this view objected, that the high temperature, which had been used to destroy the atmospheric germ of the infusoria and mildews, had very possibly produced a chemical change in the gases of the atmosphere, and that the new bodies formed by this change were unfavorable to the process of putrefaction. To meet this objection, Schroeder and V. Dusch performed the following experiment: They placed putrescible matter in a retort with distilled water, and expelled the air by boiling; then, instead of allowing calcined air to enter, they stuffed the neck of the retort with a thick plug of cotton-wool—thus effectually filtering the air passing in from all germs, which were caught in the meshes of the filter, and the infusions were kept perfectly fresh, even in warm weather.

In regard to this experiment, I will say that, in order to secure perfect immunity from putrefaction, the interior of the vessel should be submitted to a heat of 300° F. instead of

212°F. If this is done, and the cotton-wool plug quickly put in, the preservation of the contents will be certain. Like results from a series of experiments, conducted in a similar manner, have since been published by Lister, Roberts, and a host of other experimenters. They have succeeded in keeping perfectly fresh, blood, milk, and all other organic fluids, so liable to undergo decomposition.

In testing these experiments, the writer at first experienced much difficulty in isolating the organic fluid in an aseptic atmosphere, without allowing it to come in contact with the germ-laden air.

I think the following process will generally overcome the difficulty, and beg leave to recommend it to notice: Carefully cleanse, with a disinfecting fluid, the rack aspirator of M. Dieulafoy; thrust the needle, connected with one of its flexible tubes, through the plug of cotton-wool which stops the mouth of an ordinary test tube, which has just been taken from a sand bath, whose temperature is 300° F. Next, fasten a needle to the extremity of the other flexible tube; and when this is done, introduce it into an artery or into the bladder of some small animal, and open the stop-cock—thus connecting the tube with the vacuum which you have previously made in the cylinder. When a small quantity of blood or of urine shall have passed into the vacuum, shut off the incoming fluid, and connect, by means of the other tube, the fluid with the isolated cavity of the test-tube; reverse the piston and force the fluid into the tube; quickly draw the needle from the mouth of the tube, and the fluid thus isolated will keep indefinitely.

But this is a digression. Pasteur, in his experiments on this subject, divides the organisms which produce putrefaction into two classes. (1) Microphytic bodies which live by means of oxygen; and (2) those which live without oxygen. He declares that in a putrefying liquid containing albuminoid matter, infusoria, such as the *monas crepusculum* and *bacterium termo*, first appear, and carry on the process, until all the oxygen of the solution has been used up. These then disappear, and their place is supplied by certain vibrios to whom oxygen is unnecessary. The putridity, he says, becomes

much more intense after the development of these last, so that one is scarcely able to handle the minute amount necessary for microscopic examination. Pasteur teaches that the organisms which first appear, split up the nitrogenous matter into more simple, yet still complex products; and that the later forms which appear produce a further subdivision, consisting of water, ammonia, and carbon dioxide, as final products. It is fair to state that while all agree as to the presence of organisms in putrefying matter, there still remain some who maintain Liebig's physical theory, and who assert that the organisms always present originate, not from the atmospheric germs, but from heterogenesis in the changing fluids, and are not the cause of the process. The discussion of the facts of their assertion demands a consideration of the old question of spontaneous generation, which we will speak of in connection with the second division of our paper.

Before leaving the subject of fermentation, mention should be made of certain amorphous principles derived from organic cells, such as zymase from beer yeast, diastase from barley, and ptyalin, pepsin, and pancreatine from certain glands in the human body. These are also capable of setting up special fermentations. Thus ptyalin (from the saliva) is capable of converting starch into sugar; pepsin will change albuminoids into albuminose, and so on. Fermentations, however, which are initiated by these soluble ferments, do not give rise to organic forms; this makes them an exception to the general rule. They are principles manufactured by living cells, and are incapable of reproduction, and of imparting their peculiar properties to other matters; hence, it is plain that their action is limited.

We may conclude, then, that while in fermentation we commonly see an example of biological action, yet, when brought about by any of the soluble ferments just treated of, the phenomena are not explicable in terms of vital force.

[TO BE CONTINUED.]

ART. II.—**Hints upon the Rearing of Hand-fed Children.** By CHARLES H. S. DAVIS, M. D., Meriden, Conn.

A large proportion of the children born into the world die before they have attained the first anniversary of their birth; and myriads of innocent children have been victims of disease which might have been averted by wholesome sanitary conditions, good medical treatment, or enlightened parental care. A very large percentage of this mortality is caused, either directly or indirectly, by diseases of the digestive organs, and these by improper food. Dr. Eustace Smith, author of *Wasting Diseases of Infants and Children*, and one of the best authorities on the treatment of infants, says: "A child is not nourished in proportion to the bulk of food he receives into his stomach. He is only nourished by the food he can digest. Among the poorer classes, they are commonly fed on farinaceous diet as soon as they are born; and this, of course, they are totally unable to digest. As a consequence, they dwindle and rapidly die; or if of particularly robust constitution, linger on, weak, ailing and rickety, until an attack of bowel complaint or other in-current disease carries them off."

Food must answer two distinct purposes—one is to furnish material for the growth of the body, the other to afford matter for the maintenance of its temperature; and life cannot be long supported except on a diet in which the elements of nutrition and the elements of caloric bear a certain proportion to each other. Now, in milk—the proper food of infants—the elements of the former are to those of the latter in the proportion of 1 to 2; in arrowroot, sago, and tapioca, as 1 to 26; in wheaten flour, as 1 to 7; in malt flour, as 1 to 5. There is, perhaps, no error more common than that of administering, to the infant, arrowroot, corn starch, tapioca, rice, oatmeal, sago, bread, crackers, or other starch foods, with the idea of thereby enriching the aliment provided by the substitution of cow's milk. This error is a very grave one, and the administration of this starch food is very injurious to infants, as it is not until after dentition that diastase is secreted by the salivary glands, and starch food remains in the stomach

and intestines, not as food, but as a substance non-assimilable, foreign, and only disposed to irritate the delicate membranes. Dr. Routh, author of *Infant Feeding and its Influence on Life*, says: "I cannot conceive anything more injurious than arrowroot feeding. I believe it is a cause of death of many infants."

The principal nutritive qualities contained in milk are butter or fat, casein or cheesy matter and sugar. Human milk is not only more nutritious, but more easy of digestion than cow's milk, because it contains, in proportion to the whole quantity, more butter and sugar and less casein. The latter ingredient is not a proximal principle, but must undergo digestion before it is available for purposes of nutrition.

In case of infants who are deprived of their natural nutriment, we should endeavor to provide something as nearly resembling human milk as possible. Such articles of food, by which regularity in the action of the bowels is induced, quiet and appetite maintained, and strength and growth promoted, should assuredly receive the preference. If children could always receive their mother's milk, the duties of parents and physicians would be comparatively light; but, unfortunately, this is not always the case. The milk of many mothers fails in a few months after parturition, either wholly or in part, or the physician is obliged to forbid the mother to nurse her infant on account of previous illness, of hereditary disposition to disease, of debility during the lying-in period, etc. In many cases, however, the causes for not nursing a child are of a less justifiable nature.

Cow's milk alone is assuredly not sufficient for the sustenance of a new-born infant; nature adapted it to the stomach of a calf—not of a child. The rapidity with which a calf grows, the greater size of its body, and smallness of its brain, require that the milk which is to nourish it shall contain a large amount of the material which goes to make bone and muscle, with a relatively smaller proportion of that which is to build up the nervous system; and accordingly we find that the amount of casein in cow's milk is largely in excess of that of the woman, while the sugar and butter are less, as will be seen by the following table:

<i>Composition of Milk of Woman.</i>	<i>Of Cow.</i>
Water.....	87.98.....87.02
Casein	1.52.....4.48
Butter.....	3.55.....3.13
Sugar of milk.....	6.504.77
Salts.....	.45......60

It is evident, therefore, that to adapt cow's milk to the wants of a child, a change must be made in it.

By using wheat flour, combined with malt in the proportions given by Baron Liebig, the influence of heat, corresponding with that of the stomach, causes the digestion of the flour to be fully performed. A little bicarbonate of potash prevents any tendency towards souring. The formula of Liebig has undoubtedly saved the lives of thousands of infants in this country and Europe. Says Baron Liebig: "It is understood that if a child be refused its natural food, the mother or nurse has to provide its nourishment. The child's improvement depends on the correct choice and mixture of the aliment. It is no mistake, but a fact, that the usual farinaceous foods are the causes of most of the diseases, and half the cases of death, among all the babes in the country, as well as in large towns."

Malt contains diastase, which exists in the saliva of adults, but does not exist in the saliva of infants, and therefore the latter cannot digest starchy food. The diastase in malt flour exerts a most remarkable influence upon the starch, quickly transforming it into dextrin and sugar; so that, in the course of a few minutes, the food, from being thick and sugarless, becomes comparatively thin and sweet. This preparation is alkaline instead of acid, which latter is an improper attribute of nearly all the infants' food sold. It is hardly probable that artificial food will agree with every child, inasmuch as the mother's milk will sometimes not agree with her own child; but we find after several years experience with malt flour, prepared according to Liebig's formula, that it will agree with a larger proportion of children than any other artificial food, as it is easy of digestion, highly nutritious, and pleasant to the taste. It contains the formative elements of flesh, blood and bone; also carbonaceous matter for the main-

tenance of animal heat. Analysis has shown that it is rich in albuminoids and phosphates, and free from farinaceous matter, the starch having been changed into dextrin and malt sugar, thus relieving the stomach from a part of the burden of digestion. By Fehling's copper test, it will be found that every trace of starch is either converted into grape sugar, or into matter readily transformable on the addition of warm milk and water. In the condensed Swiss milk, the concentration of the cheese and cream, and the excess of cane sugar, will be found to be very indigestible, unless enormously diluted; but in that case, other important alimental agents are insufficiently present. This is the fault of all milk foods.

Cow's milk is best prepared as follows: The milk of a fresh cow should be allowed to stand in a vessel as deep as broad, for about three or four hours, when about one-third of the upper portion should be dipped off (not poured). Add to this, when dipped off, an equal quantity of warm water, and put in refined sugar until it becomes perceptible to the taste. The water used should be soft and pure. Filtered rain water is best; but, in the absence of this, well water may be boiled and then allowed to cool, and, after the lime has settled to the bottom, the water can be carefully poured off.

The milk of the Alderney, or crosses of that breed, sometimes require nothing more than the addition of water and a little sugar, and sometimes only the latter, to agree perfectly with a child. The Devon breed is the next best. But whatever breed she may be, it should be one that gives milk abounding in cream, for in any case where this is deficient, and more particularly when, after being skimmed, the milk looks watery or bluish, it should be rejected. The morning's milking is the most suitable, because it is less likely to be injured from the irritation caused by heat and flies. The cow should be salted regularly, and may receive a daily allowance of bran with advantage, but she should on no account be allowed to eat swill of any kind. During warm weather, it is important that the milk should be kept either on ice or in a cool place. Should there be danger of the milk turning sour, a pinch of bicarbonate of potash should be mixed with it.

When the child's stomach is very weak and inclines to vomit its food, I have found milk prepared as follows to be of benefit: One-third of a pint of pure milk is allowed to stand until the cream has risen. The latter is removed, and to the blue milk thus obtained, about a square inch of rennet is to be added, and the milk vessel placed in warm water. In about five minutes, the curd will have separated; and the rennet, which may again be repeatedly used, being removed, the whey is carefully poured off, and immediately heated to boiling, to prevent its becoming sour. A further quantity of curd separates, and must be removed by straining through calico. In one-quarter of a pint of this hot whey is to be dissolved three-eighths of an ounce of milk sugar; and this solution, along with the cream removed from the one-third of a pint of milk, must be added to a half-pint of new milk. A fresh quantity should be prepared every twelve hours, and the strictest cleanliness of all the vessels used is indispensable. Should the whole of the contents of the nursing bottle not be taken, the remainder must be thrown away. A bottle should never be refilled until both it and the rubber cap have been thoroughly cleansed in hot water. A white glass bottle only should be employed, in order that any want of cleanliness may readily be detected.

Whenever it is apprehended that the milk may have an acid reaction, it should be tested with litmus paper, and, if found so, a little lime water may be added to render it slightly alkaline.

In regard to the quantity of food that a child should take each time, it will depend upon its age and upon its natural requirements; for while one child is easily satisfied, and thrives on two ounces of milk every two hours, another will require more. As a general rule, to an infant of one or two months, two or three ounces are sufficient; from the second to the fourth month, from four to six ounces; afterwards, from six to eight ounces. For the first two months, to the milk should be added an equal quantity of water; from the second to the sixth month, one-third; afterwards, the child may have it pure. During the day, for the first two months, if the child is vigorous, it should be nursed every two hours;

during the third and fourth months, every three hours; after that, every four hours. No infant, in ordinary health, really requires nursing more than once or twice during the hours which the mother needs for rest.

ART. III—**Gastro-Hysterotomy in Virginia.** By ROBERT P. HARRIS, M. D., Philadelphia, Pa.

As it may be of interest to the readers of this journal, and especially those in Virginia, to know what number of Caesarean cases have been credited to the State; what has been the success of her operators; and why they have so largely failed in saving life, I have prepared this abstract from my case-book, in which are now collected the records of 107 of this class of operations, to the credit of all the States of the Union, collectively.

In the *Virginia Medical and Surgical Journal*, vol. VII, 1856, p. 170, will be found a record of the Virginia cases, as far as they were known to the contributor of the article, up to that time; and I now propose to fill up and complete the history as far as possible, in the hope that a more thorough examination within the State may lead to the discovery of lost operations, and aid in perfecting such of the records as are incomplete in important points, as will be learned by an examination of the abstracts given.

As far as a diligent search has enabled me to ascertain, there have been 8 gastro-hysterotomies in the State, in a period of fifty years, which resulted in saving the lives of 2 women and 3 children. Five of the subjects were dwarfs—2 white and 3 black—one of the latter having been twice operated upon. There were, therefore, 7 women to the 8 operations. Of the dwarfs, but one survived—the operation being the only one performed at an early period of the labor, as well as the only instance in which it saved both mother and fetus. Of the 7 women, 4 were blacks and 3 whites, one of each being preserved.

CASE I.—1828. Occoquan, Va. Operator, a Fairfax county empirical surgeon, somewhat famous in his day for his bold ventures with the knife. Case reported by Dr. M. S. Weems,

in *Am. Jour. Med. Sci.*, vol. XVIII, p. 257. This is the sixth Cæsarian operation in chronological order in the United States, so far as has been ascertained, and the first in which the uterine wound was stitched up. It is remarkable that one third of the failures in Virginia should appear to be due to indiscretions in eating—the result of lamentable ignorance in the women operated upon. The subject of this operation was a mulatto of about 25 years of age, who was exhausted by prolonged gestation, and nature's efforts at expulsion labor—occurring at intervals during 12 or 15 months—owing to an occlusion of the os uteri, with a calcareous deposit over the internal os, the pelvis being regarded as normal. Although, according to Dr. Weems, the operator was, at best, only a bold bungler, there is reason to believe he would have saved his patient if she had not, in the middle of the second week, very indiscreetly partaken of animal food and cider, the effect of which was to set up a peritonitis, of which she died in 48 hours. The proper operation in such a case would be that of incising and dilating the cervix.

CASE II.—1845. Fredericksburg, Va. Operator, Dr. Brodie S. Herndon. This was also an instance of uterine occlusion, and resulted from an attack of metro-peritonitis, occurring after the commencement of labor, and several weeks before the operation, during which interval there were occasional attacks of uterine expulsive pains. The subject was a white woman, aged 30, moderately robust, but extremely prostrated by disease and labor pains. She was also carrying in her uterus a putrid fœtus. Fortunately for the success of the operation, the uterus was adherent to the abdominal walls, and the peritoneal cavity was not opened. The woman recovered. (*Am. Jour. Med. Sciences*, 1846, vol. XII, N. S., page 386.)

CASE III.—1855. Eastville, Northampton county, Va. Operator, Dr. William G. Smith. This is a third case of occlusion, but seated in the vagina, and the result of vaginitis following an abortion in March, 1853. The subject was a black woman of about 25, and at the time of the operation was exhausted by a fruitless waiting for nature to accomplish the delivery. The woman died of exhaustion in six days. The child was alive, and was still living fifteen months later. (*Va. Med. & Surg. Jour.*, 1856, vol. VII, p. 203.)

CASE IV.—1856. Richmond, Va. Operator, Dr. Charles S. Mills. This year was a remarkable one in the history of the Cæsarean section in this country, and especially of the State of Virginia, as three of the four operations were upon

dwarfs, and all three were in the State in question: one woman was 3 feet 6 inches, one 3 feet 9 inches, and the height of the other could not be furnished by the operator.

The subject of Dr. Mills' operation was a deformed, rickety dwarf, aged 23. She was a black woman, with a large head and chest, narrow pelvis, and remarkably short body and extremities. Embryulcia being found impracticable, no time was lost, and the section was made after an active labor of $4\frac{1}{2}$ hours. The result of this timely relief saved both mother and child, as the uterus contracted quickly, and the strength of the patient was not wasted. The cure was retarded by an attack of phlebitis on the 18th day, but she was well in all other respects at the end of four weeks. Had all the cases in the State been operated upon with the same degree of promptness, we should have to chronicle a very different result. (*Monthly Stethoscope*, Richmond, Va., 1856, p. 424.)

CASE V.—1856. Richmond, Va. Operator, Dr. Edward C. Drew. The subject was a black dwarf of 19, with a deformed pelvis, having a conjugate diameter of $1\frac{1}{4}$ inches. I have not been able to ascertain the height of the woman, or the time she was in labor prior to the operation—Dr. Drew having lost his notes of the case in the fire of Richmond, in 1865. When the operator called to see her on the fourth day after delivery, she was apparently convalescing very favorably, and was “nursing her child, with smiles and other evidences of maternal fondness;” but in two hours after this visit, she was dead, having been seized with convulsions, which were attributed to her having indulged “her appetite, in tough and indigestible pastry.” Unfortunately, at the autopsy the stomach was not examined, but I had been told that she had eaten apple-dumpings. The pelvis was carefully prepared and preserved, and is probably hidden away, or lost sight of somewhere South, as Dr. Drew believes that it was carried off “by a surgeon in the Southern army.” Wherever it may be, it ought to be returned to Richmond, as there have been but few Cæsarean pelves prepared in the United States. I know of but two in the collections of this city.

Dr. Drew's operation was performed in May, 1856, only a few days after that of Dr. Mills, which was on the 12th. The child removed will be remembered by many of the citizens of Richmond, as a diminutive, deformed newsboy, who, with a cheerful disposition, hobbled along upon his little crutches and badly-bent legs in his round of trade. He was a specimen of the excess of deformity to which infantile rickets is

capable of reducing the human frame. When 19 years old he was drowned at Gloucester, New Jersey, near to Philadelphia, in the Delaware river, whither he had gone, I believe, with some show company. (*Case communicated by the operator, Nov. 30, 1877.*)

CASE VI.—1856. Norfolk, Va. I regret that I cannot yet state who was the operator in this case, as letters of inquiry sent two months ago, remain unanswered; but the fact of the operation having been performed is clear, as we have the skeleton of the woman and skull of her fetus in the museum of the Obstetrical Society in this city. The woman was a diminutive white dwarf, only 3 feet 6 inches high, with a reniform, rachitic pelvis, much deflected backward at the sacro-vertebral angle, and having a conjugate diameter of $1\frac{3}{4}$ inches, and transverse of $4\frac{1}{2}$ inches. How long the woman was in labor, how long she survived the operation, and what she died of, have not as yet been reported. Craniotomy was attempted before the Cæsarean section, and the fetal head bears the mark produced by a pair of Smellie's scissors, in the posterior part of the left parietal bone; but it was found impossible to manipulate, in consequence of the axis of the superior straight striking the abdominal wall but an inch or two above the symphysis pubis—the angle of inclination between the vertebrae and pelvis, usually about 150° , being brought to a straight line.

This dwarf bears the evidence of rickets, in an anterior bending of her ossa humeri, just above the elbows; but her lower extremities are straight and strongly built—the bones being quite thick for so diminutive a woman. In life, she is said to have been very fat. She was of feeble intellect, although her head is apparently well-developed, which a close examination will show to be largely due to an excessive thickness of skull. She died at a house of prostitution.

CASE VII.—1867, October 8. Richmond, Va. Operator, Dr. Charles S. Mills. Subject, the same dwarf upon whom he operated eleven years before, and now 34 years old, five months pregnant, and affected with dysentery and peritonitis. The attack of enteritis commenced about October 1st, and labor on the 6th, having existed two days when the operation took place. The child lived a few moments after extraction, and the woman died of the pre-existing disease in four days. (See full report of case in *Am. Jour. of Obstetrics*, vol. IV, 1872, p. 650.)

CASE VIII.—1875. Portsmouth, Va. Operator, Dr. Jas. Parrish; accoucheur, Dr. Charles R. McAlpine. Woman

white; Irish; aged 21, and scarcely 4 feet high; a primipara, and married; operation on September 14th. Woman consulted Dr. Parrish on May 1st, 1875, as to the possibility of her being delivered at term, and was advised to have an abortion produced at once, which she declined on account of religious scruples. When taken in labor at term, she very foolishly put herself under the care of an ignorant midwife, who used ergot freely. At the end of three days, Dr. Parrish was called in, and found the woman exhausted, and with a pulse of 120. He operated and removed a dead fetus, and the patient died in eight hours—death being attributed to secondary hæmorrhage from *post partum* gaping of the uterine wound.

The obstacle to natural parturition was the existence of deformity of the pelvis, connected with ankylosis of the right hip-joint, the thigh being fixed nearly at a right angle with the pelvis. (*Communicated by the Operator, October 31st, 1878.*)

Thus, it will be seen that promptness of operating favors recovery, and delay is apt to result fatally. Exhaustion of the woman has a tendency to increase the risk of incising the uterus, and hence the importance of an early operation.

The record of Virginia is quite in contrast with that of Ohio, the number of cases being the same, and the results exactly reversed—the latter losing two women and saving six, all eight subjects having been white; and also preserving one-half of the children. The result in Ohio is one of the most remarkable in any State, as it largely depended upon a fortunate train of circumstances, not at all likely to duplicate itself in the future; for, as in Virginia, but one woman was operated upon in the early hours of labor, and she and her child was saved. The recoveries in Ohio can all be readily accounted for. Nos. I, II, III and V were all vigorous subjects, that had never had rickets, and whose pelves were not deformed; all recovered. Nos. IV and VIII were delicate—one a rachitic dwarf, the other coxalgic—and both died. No. VI was rachitic, but recovered, as she was in labor but 7 hours. No. VII was a stout, rachitic dwarf, and operated upon late, but by choice, as the membranes were entire, and the operator long in attendance. He regarded her condition as favorable at the time.

It will thus be explained why Ohio has the better record, with the same number of cases—Virginia having been unfortunate in the character of her subjects, their previous conditions of disease, dwarfed stature, and ignorance of the rules of diet. Having just made a rigid analysis of the *timely* cases in my record, I find nearly the same result as given from the first 60 operations, under the same method of sifting, published in the *American Journal of Obstetrics* for February, 1872. There were then 17 cases, with 12 women saved, and 14 children, 16 delivered alive; and there are now 26 cases, with 19 women saved, and 18 children, 22 children delivered alive. That is a little under 73 per cent. of woman saved in the first table, by timely operating, and a fraction over it in the second.

713 Locust Street.

ART. IV.—Experiments with Oxygen Gas—It is an Anæsthetic.

By WM. B. GRAY, M. D., Richmond, Va.

In the *Virginia Medical Monthly* for August, 1874, I published a paper on oxygen gas and its apparent anæsthetic effect. Desiring to pursue further this line of inquiry, I was fortunate in being able to associate with me, for this purpose, Jud. B. Wood, M. D., D. D. S., a gentleman particularly prominent in the dental profession of this city, also an earnest, anxious and searching inquirer after truth in the various fields of medical research.

In the month of March, 1879, we ordered a one hundred gallon cylinder of oxygen gas, from Mr. W. E. Gladstone, of New York, which was duly received, and we offered a free clinic on the 24th of the month, to all such as needed, and were willing to submit to the extraction of teeth, under oxygen gas. Six colored patients accepted our proposition.

Lewis M. Cowardin, D. D. S., assistant to Dr. Wood, O. Fairfax, M. D., C. W. P. Brock, M. D., and J. G. Trevilian, M. D., all of this city, were present with us, and to each of them I am indebted for valuable assistance and observation.

CASE I.—A. G., female, aged 23 years, was seated in the dental chair, and her pulse, respiration and temperature noted as follows, viz.: Pulse 80; respiration 21; temperature (under tongue, as in all the cases), 100°F . Twenty-seven gallons of the oxygen were then administered to her, from the same four gallon bag I had formerly used. In ten minutes, Dr. Fairfax counted the pulse and found it 90 per minute. In five minutes more Dr. Fairfax counted again and found it 80 per minute.

Dr. Wood now extracted six teeth, consisting of both crowns and roots, and twenty roots—the remains of the other ten teeth. Her pulse now beat 92; her respirations per minute were 28; and her temperature registered 99° .

Question.—“Did the gas do you any good?”

Answer —“It certainly did.”

The gums of this patient were spongy and sensitive, and the roots of the teeth quilled, difficult to reach, and equally difficult to extract. A few days before, Dr. Wood had removed one tooth for this woman. She declared that the extraction of the sixteen teeth had not pained her “anything like so much” as the removal of the single one referred to.

CASE II.—M. P., female, age 17 years; pulse 106; respiration 28; temperature 101.5° . She took ten gallons of the gas. In three minutes after commencing the use of it, the pulse counted 132. Dr. Wood now extracted the two lower bicuspsids, and the roots of the upper second molar, the gum being turgid and very sensitive, and the operation for their removal requiring time and patience. The woman says the removal of “only the last tooth” gave her pain.

CASE III.—E. J., female, aged 23 years, nervous and much frightened as she came to the chair. Pulse 82; respiration 22; temperature 100° . This patient took twenty gallons of the gas, very imperfectly and impulsively. Dr. Wood extracted the superior central and lateral incisors. When about half through with the operation, she screamed, and became, for a moment, quite unmanageable. Pulse 76; respiration 22; temperature 101° .

Question.—“Did you feel any pain?”

Answer.—“I felt no pain, but was conscious of the pushing and pulling of the instrument.”

Question.—“Why did you scream?”

Answer.—“I don’t know unless because I was scared.”

This patient came to me the next day and asked to have her remaining teeth taken out, and use the gas again for that purpose.

CASE IV.—J. P., male, aged 15 years. Pulse 84; respiration 22; temperature 100°. Quantity of gas administered was seven and a half gallons. His pulse rose to 132 beats per minute. Dr. Wood extracted the roots of three teeth, only the last of which, the patient admits, gave him pain.

March 31.—Drs. Trevilian, Brock and Cowardin were present to-day, the other gentlemen being unable to attend.

CASE V.—K. F., female, aged 19 years. Pulse 72; respiration 21; temperature 99°. This patient took ten gallons of the gas. Dr. Cowardin extracted the lower second molar. On a former occasion, he had removed two teeth for this subject, and he says the one of to-day was much more difficult of removal.

The woman says she felt “numb; the gas is a great relief, but I felt some pain.”

CASE VI.—L. M. W., female, aged 35 years. Pulse 132; respiration 22; temperature 100°. Ten gallons of gas were administered. Dr. Wood extracted two bicusps. The crown of third tooth was decayed off, and the roots were entirely covered, and consequently concealed by the swollen and extremely sensitive gum. Finding it was going to be a severe and tedious operation, a little chloroform was administered to an extent which, it was thought, would be sufficient to accomplish the necessary cutting and extraction, which proved not to be the case however, as she soon recovered full consciousness, and complained of so much pain that further interference at present was not thought advisable.

Question by Dr. Brock.—“Did you feel either of the two first teeth when they were drawn?”

Answer.—“No sir.”

Question.—“Did you ever take nitrous oxide?”

Answer.—“Yes sir.”

Question.—“Was this like that?”

Answer.—“No sir.”

Question.—“Was there any unpleasant effect from the oxygen?”

Answer.—“No sir; I am fully satisfied with it.”

On both occasions, the gentlemen present fully concurred with me that oxygen gas is undoubtedly anæsthetic for two or three minutes after withdrawal of the gas. It will be noted that the drawing of *the last* teeth in all the patients gave pain. That oxygen gas is not anæsthetic to the same degree as nitrous oxide we equally agree.

I notice that many who have written on the subject of oxygen gas have spoken of its tranquilizing effect. The last paper that has come to my notice on the subject, is that of Dr. W. L. Robinson, which was published in the *Transactions of the Ninth Annual Session of the Medical Society of Virginia* (1878). In one of his cases, six gallons of the gas produced "a sweet, quiet sleep of two hours;" in another, "the oxygen gas had kept the child *comfortable* and *quiet*."

Maj. M., an old asthmatic patient of mine, upon a recent visit South, was seized with a violent paroxysm of asthma. He called in a gentleman of eminence in the profession, who gave him oxygen gas. The Major, upon his return to Richmond, some ten days ago, told me of the circumstance, and said he did not intend to take any more oxygen gas, "that it not only put him to sleep, but it deprived him of his senses also."

I do not wish to be construed in the light of opposition to oxygen gas as a remedy, and a valuable one for relief from, and the cure of many diseases. It is to call the attention of the profession to its mild, gentle and apparently safe *anæsthetic* effect merely, that I write this paper.

Reference to my first experiments with oxygen gas will disclose the fact that, one gallon and a half of the article seemed to have produced an effect equal to twenty-seven gallons administered to another subject. In view of this wide quantitative difference, the question naturally arises as to what is an anæsthetic dose of oxygen? When the face and lips have lost their first bright red color, and that has been replaced by one of greater or less lividity—when the eye is suffused and fixed, the breathing and pulse slower, and the face has become passive and quiet—whether one gallon or more has been taken, I consider the patient then experiencing anæsthesia.

How is oxygen gas anæsthetic? It is a supporter of combustion, of which carbonic acid is a product. Do not the symptoms detailed above as an effect of oxygen gas administration, point to a highly carbonized condition of the blood? If carbonic acid have been generated—and it would seem to be a reasonable deduction from the facts patent—and if elim-

ination at the same time be inadequately performed because of diminished respiration, why may not this theory be regarded as at least plausible?

I regret that the respirations were not counted in all of my experiments just at the moment when anæsthesia was thought to have occurred; but I am satisfied that in every case it was decidedly slower. In the case of Mrs. W. (noted in my first paper), the respiration diminished 25 per cent.; and in that of experiment No. V (in the same paper, August, 1874), $33\frac{1}{2}$ per cent.

In concluding this paper, I beg leave to call attention to an article in the *Virginia Medical Monthly* for September, 1874, page 376; to one in the second edition of Cohen on *Inhalation—its Therapeutics and Practice*; and to the fourth edition of Stille's *Therapeutics and Materia Medica*, Vol. I, page 404.

ART. V.—**Tubercular Abscess—Opened by "Screw-Worms."**
By T. N. CLARK, M. D., Reagan, Texas.

J. H., a farmer, married, aged 64 years, called me in to treat him for acute dysentery on the 18th of August, 1878. He had had a slight "hacking cough" for a year or more, which caused no disturbance, however, until a few weeks previous to his present illness, when he suffered with a mild attack of bronchitis with fever, which reduced his strength very rapidly for a very few days. I am particular in noting this previous sickness for the reason that it explained most satisfactorily a symptom that I had noticed for a year or more when the patient was in good health, namely, a horribly offensive breath; and this recent bronchial attack convinced me of the existence of tubercle of the lung, only by accidental examination.

In conjunction with his dysenteric suffering, he also complained of severe pain extending from the posterior nares to the root of a molar in the left superior maxillary and the left lachrymal duct. Supposing the pain thus referred to was neuralgic in character, originating from exposure, as were the dysenteric symptoms, I treated the latter with ipecac, and left chloral and morphia to tranquilize him and procure sleep as needed.

The following day he was much improved in every partic-

ular, with the exception of continued severe pain in the left side of the face and nostril, from which he was constantly blowing out on a handkerchief a little bloody sanies. To learn the cause of this, I examined, by the aid of sunlight, the Schneiderian membrane as far back as possible; but discovering nothing more than an ordinary catarrhal congestion, I diagnosed the pain and facial suffering as neuralgic in character, and prescribed accordingly.

On the following afternoon, I was hurriedly called to the patient, and was told by the excited family in a whisper, just before entering the room, that they thought the patient had "screw-worms" in his nose. An immediate examination now disclosed that such was the fact; they had multiplied and grown during the previous twelve hours sufficiently to fill the posterior nares, from which was constantly dribbling a thin bloody sanies. I immediately filled the left nostril with dry calomel, and plugged it securely with damp cotton, so as to prevent the entrance of air. I gave the patient a dose of morphia, and instructed the attendants not to remove the plug until my return at 11 P. M., at which time the worms would have become partially asphyxiated, and would be moving over the mucous surface near the margin, in search of air, from which, my usual practice is, to wash them out with a syringe.

The patient, whose health was evidently declining from tubercular disease, complained of extreme prostration and restlessness, and seemed apprehensive of some evil result from the worms in the nose; but I assured him of the little difficulty of exterminating them, and endeavored to re-assure him of nothing more than temporary discomfort resulting therefrom.

Before the time for my next visit, another physician was called in, who, on arrival, removed the cotton plug, and commenced trying to extract the worms with forceps. Meeting with but little success, he called me in, whereupon I suggested the first plan of practice without interference, and surrendered the case. The medical attendant remained with the patient several days, during which time a large number of worms were taken from the nose. One at least was swallowed, as is known by its ejection per anum, and it is possible, others entered the stomach, causing pain and uneasiness. They were frequently crawling into the posterior fauces and hawked up through the mouth.

About the third day after the discovery of worms in the nose, while still under treatment of the physician, I was

called by him to see the patient again, who met me with this remark before I entered the chamber: "I don't exaggerate when I say he suddenly threw up my double handful of mucopurulent matter, which nearly strangled him, and would have done so had he not swallowed it: I have no conjecture where it came from." There was no effort to vomit; there was no regurgitation—only a slight cough—and immediately the mouth became filled, and as quickly emptied through the *œsophagus*—the quickest possible way to avoid strangulation and clear the half-filled trachea. I told the Doctor that this discharge was evidently the yield of a pulmonary abscess, and the patient's condition, as examined a moment after, abundantly proved this suggestion to be correct.

A state of collapse immediately followed, and death occurred in six hours.

The "screw-worm" seems peculiar to Texas, or, at least, the Trans-Mississippi. They are numerous from the beginning of warm weather until frost, infesting stock of all kinds, dogs and sheep, wherever the parent fly can find a drop of blood to deposit the egg. I have met with several cases in the human subject where, by accident or carelessness, the fly has been allowed to deposit the egg; and in every instance, where dry calomel can be applied, they are easily destroyed.

The fly, whence comes the worm, makes its appearance here, west of the Mississippi and south of 35° latitude, from the middle to the last of May—the advent of *hot* weather.

The impression with every one in this section is, that it deposits the egg like the common "green fly." But instead of the larva, I think the worms are deposited pre-hatched (ovo-viviparous?), as they immediately commence feeding upon the vital tissues of an open wound, or a drop of blood, according to the accident of their place of deposit. From this larval (?) state, they grow very rapidly, attaining the size of a maggot in thirty-six hours, and by the third day they attain their largest size, which is from one-half to five-eighths of an inch in length.

Surrounding the body are successions of circular rings from one extremity to the other, quite like the threads on a screw; and when fastened by one end upon the vital tissues (in which position they are generally observed), their free ex-

tremities keep up a constant semi-rotary, peristaltic motion—burrowing deep cavities in the flesh, and releasing their hold only to crawl nearer to the surface for air, if that be much excluded by the depth of the wound, or by the quantity of sanies resulting from their work.

The parent fly *is not* identical with the “green fly,” which produces the maggot. Its color is that of the house fly, but much larger. No year is exempt from their visitation, however dry; but their destructiveness from increased numbers is in proportion to the amount of rain. During such excess, they have been known to deposit the worm in decomposing vegetable matter, such as the fungus of green corn, etc.

The above case seems to me interesting from the following facts; If calomel be applied to the worms in a wound, the chemical action, possibly, of the mercury, produces irritation, and they move rapidly and in any direction to escape its presence. If the air be excluded from the locality, their migratory efforts are also active, and they crawl into the posterior fauces, as in the above-mentioned case, to supply that want. The worm that was swallowed might have fastened itself on the mucous membrane of the stomach or bowel, had it not been for the absence of atmospheric air; but its own excited peristaltic action as that of the bowel, kept it moving until it was thrown off alive.

In their hurried retreat from the presence of mercury in the closed nostril, backward, it seems to me quite possible that some of them passed into the trachea and bronchi, and there found a safe refuge; and by fastening themselves upon the now already attenuated, and possibly distended bronchial membrane, easily perforated the thin walls of an abscess which emptied itself by their sudden collapse. This entrance of the worm seems probable from the fact that the patient was conscious of constant tracheal irritation, with a slight cough and disposition to clear the throat.

The coincidence of the bursting of the abscess during the trouble with the worms, has so often since been the subject of reflection, that after analyzing all of the circumstances of the case, I am led to think it was not only a coincidence, but that the one was the cause of the other.

ART. VI.—**New Formations.** By EDWARD WIGGLESWORTH, M. D.,
Special Clinical Instructor in Syphilis, Harvard University, etc., Boston, Mass.

TREATMENT OF NÆVI BY MULTIPLE SCARIFICATIONS.—Following Balmanno Squire, Vidal has removed from the face and body various abnormal growths by means of scarification; large nævi diminished in size, and small ones disappeared under this treatment from obliteration of vessels and cicatricial formation. After the fourth scarification, and at times earlier, the part operated on appears of a rosy instead of a purplish red color as before. Next, small islets form in the nævus, which soon assume the color of healthy skin. Best of all, the scarified tissues show often, after complete cure, no signs of a scar. For the operation, Vidal recommends small lancet-shaped needles, with which several incisions, 1 to $1\frac{1}{2}$ mm. in depth, are to be made. Deeper incisions may give rise to scars. The scarifications should be parallel and 2 mm. apart, and new ones should be made parallel with the earlier ones as soon as these latter have healed. Small nævi may be cured in one sitting; larger ones, especially upon the face, need several. The drawbacks are pain and bleeding. For the former, local anæsthetizing may be employed, and even this is not always needed. For the bleeding, touchwood or German tinder may be employed; liquor ferri is rarely required. Should the patient feel the loss of blood, the intervals between the operations may be extended. When the bleeding has ceased, it is well to wash the parts with a fine moist brush to prevent clotting in the incisions.

Vidal has in several cases needed twenty sittings for a single nævus, and considers that the result more than compensates for the time and trouble.—*Jour. de Méd. et. Chir. Pract.; Annales de la Société de Gand.*, V. Livraison, 1878; *Allg. Med. Centr. Zeitung*, 14 Sept., 1878.

TREATMENT OF LUPUS BY SCARIFICATION.—Dr. Lelongt. in his thesis upon the pathological anatomy of lupus and its treatment by linear scarification, compares the merits of this method of Vidal with those of the treatment by scraping of Volkmann. Dr. T. Veiel was the first to employ the former

method. Dr. B. Squire has conjoined both with advantage. Vidal adopts Veiel's method with good success. It does not prevent relapses: it does arrest the course of lupus and cause its disappearance in a comparatively short time. The skin is locally anesthetized; then with a needle like a cataract needle, linear, parallel incisions are made as close to each other as possible. Similar cross cuts are then made, leaving the skin divided into lozenges about 2 mm. broad. These incisions must penetrate the whole thickness of the skin—a rule which it is easy to observe, as the sound and diseased tissues differ markedly in consistency. The whole surface is to be thrown off, so that there need be no fear of making too many scarifications. Hemorrhage is inconsiderable. Then, every morning, iodoform is powdered upon this cut surface, which cicatrizes in a week, when the process may be repeated. Every lupus nodule requires, on an average, six or seven such scarifications. The scar is flat and slightly depressed, and its redness gradually diminishes. The dermatologist must be ready to repeat the operation the moment signs of a relapse appear. Dr. Lelongt thinks that the sub-acute inflammation set up in the neoplasm destroys the old, or possibly segmenting cells, while the embryonic ones with the connective tissue, are stimulated to the formation of a cicatrix. This method is adapted to ulcerative and to erythematous lupus. Large surfaces must be treated by small, distinct islands, one at a time, which should be at first in the periphery of the patch, thus arresting more speedily the progress of the disease. This method, as well as that of the curette, have each their advantages; the latter, however, would seem preferable for hypertrophic lupus, or where the formation is considerable. The cases in which each is superior can only be decided in due course of time, when the relapses and cicatrices have been more studied.—“*Du Lupus, Anatomie, Pathologique et Traitement par la Méthode des Scarifications Lineaires, par le Dr. Lelongt.*”—*Thèse de Paris*, 1877; *Ann. de Dermatologie et de Syphilographie*, T. IX, No. 4, 1877-78.

CLINICAL DISTINCTION BETWEEN GUMMATA OF THE SKIN (LUPUS SYPHILITICUS) AND LUPUS VULGARIS.—Zeissl admits

the slight difference, microscopically speaking, between gummata and the nodules of lupus vulgaris, but schematizes as follows* the clinical differences for purposes of diagnosis:

GUMMATA (SYPHILITIC) OF SKIN.	LUPUS VULGARIS.
Localized, granulation tumors of different sizes, causing caries and necrosis of bone and cartilage.	Small, disseminated, reddish-brown nodules, which exfoliate. Intervals infiltrated.
Location. cutis or subcutaneous cellular tissue.	Peripheral reaction, or ulceration, or erysipelatous swelling.
Painful on pressure.	Nodules and ulcers nearly painless.
Commonly accompanied with ozena syphilitica.	Bone of nose commonly unaffected.
Large and deep scars remain.	Usually tendinous cicatrices.
If due to inherited taint, the velum palati is generally ulcerated.	Generally no ulceration of the velum.

SPEDALSKHED (NORWEGIAN LEPROSY).—Dr. Rabe, having visited Norway, lectured upon leprosy before the Physiological and Therapeutical Association of Dresden. He regards lepra as a disease *sui generis*, but modified by climate, race, general customs and personal habits. It is to be distinguished from Radesyge, from the Dithmarsisch disease, and from Searlievo, all of which are of syphilitic origin. The prognosis is absolutely unfavorable—death almost invariably occurring after prolonged illness, though deferred by good treatment, change of climate, etc. The tubercular form rarely lasts more than nine years; the anæsthetic from six to twenty-four. Death may be speedy from pyæmia. In a few cases, the disease-process has arrested itself and the ulcers have cicatrized. Of the many thousand lepers treated during the last fifteen years in the three hospitals at Bergen, only fifty-six can be called cured. The etiology is very doubtful. Norway has the greatest per cent. of lepers of all the countries of the world. Still it is relatively diminishing, while the population, in spite of emigration to America, is increasing. The whole country is districted; each district has a physician who visits it, hunts up the lepers, sends them to the hospitals, and a list of them to the Government, which, in spite of its poverty, spends annually large sums for the relief of such unfortunates. Twice a year, the general inspector makes a tour of the whole country. Lepra is an endemic

* Reprint from the *Annual Report of the Vienna Gen. Hosp.* for 1877.

disease, and confined, at present, in Norway, to the west coast. Lepra is hardly acquired—nearly every case being traced to hereditary taint, and this more often from the mother than from the father. Atavism is not uncommon. Danielssen has seen lepra transmitted to the fourth generation. It rarely occurs before the sixth year, and usually not until after puberty. Where occurring in childhood, it interferes with subsequent sexual development. It is more common in men than in women. It rarely appears primarily after the fortieth year of life. If inherited, it occurs before puberty; if acquired, later. The poison must work for years upon a healthy person before the disease becomes apparent. Some authors hold that it is the predisposition to lepra, and not the disease itself, which is inherited. Bæck found lepra in the descendants of leprous Norwegians who had emigrated to America many years before. Danielssen thinks there is some connection between lepra and tuberculosis.

How the first case originated in Norway is not known. The disease was there before the Crusaders returned to Palestine. How to relieve the present cases is an equally doubtful matter. There is no specific against lepra. Emigration gives the best results. The next best come from proper hygienic conditions. Cleanliness and soothing applications locally are of service, while subcutaneous injections of morphine may be used to relieve pain. Every internal remedy ever suggested has been tried at Bergen with equal lack of success.—*Arch. der Heilkunde*, 15 June, 1878.

LEPROSY IN SPAIN.—A correspondent of *La France Médicale* writes from Madrid in October, 1878, that leprosy has appeared in various districts of Alicante, calling even for the erection of special hospitals. In Valencia, during one year, one hundred and sixteen cases of leprosy occurred. Of these, seventy-one were fatal; of the non-fatal cases, seventeen were women. Moreover, a majority of the cases were probably never brought to light, since those attacked endeavor in every way to hide the fact, from even their nearest relations, as something disgraceful. The disease goes by the title, now of the "Moorish disease;" now of "the disease of St. Lazarus." In Valencia and Alicante, the malady ap-

peared under two forms—"the tubercular or lepra Græcorum (Reporter), and the usual lepra anæsthetica or lepra Hæbrosorum." Recovery "very rare." There is a special hospital for lepers near Valencia, and patients refusing to go there are isolated and subjected to the strictest hygienic regulations.—*Allg. Wein. Med. Zeitung*, Oct. 29, 1878.

LEPROSY.—Dr. J. Labouté, of Mauritius, gives, in an admirably terse and comprehensive paper, several cases of leprosy. The anæsthetic variety is the less repulsive, lacking the crude or suppurating tubercles and the leonine appearance of the face, characteristic of the tubercular form. It is, however, as severe in its effects, the patient being almost invariably rendered helpless. When it first sets in, bullæ show themselves, principally on the hands and feet, fingers and toes, where, after a short time, they burst and leave behind ulcers, which usually heal more readily than in the other form, except those which are on the plantar aspect of the foot. Accompanying this, there is numbness, varying in degree and extent; and, if a close inspection be made at the time, there will invariably be found upon the extremities discolored patches of skin of a dull white or waxy yellow hue, having, in some instances, a scaly appearance, and in others a sort of metallic lustre. Like patches are not uncommonly met with upon the face also. Muscular atrophy, which, perhaps, is the earliest symptom in this form, is now apparent, and progresses steadily, involving principally the extensor muscles of the hands. First, the little and ring fingers are flexed; then the remaining ones—flexion beginning at the distal phalanx and extending gradually to the second and first, the hand thus becoming unserviceable. Ulceration at the joints may cause the phalanges to fall off, reducing hands and feet to mere stumps. So great is the waste of muscular tissue, that the palm of the hand is soon converted into a cavity of skin and bone, the inner and outer borders closely approximating. Muscular atrophy is not general in all cases, but is mostly confined to the extremities. The countenance, as a whole, is seldom much altered, except where, from paralysis, there is eversion of the lower eye-lid with epiphora and photophobia, and dragging of the face to one side with

wrinkling of the skin, as in old age, due to muscular atrophy. Blindness may, exceptionally, supervene. Appetite, sleep and general health may be satisfactory even to the patients. Other special senses are rarely affected. Hair and eyebrows may fall. This form occurs in both sexes irrespective of age, and develops more slowly and with less suffering than the tubercular form—spontaneous cures being also more frequent. The two forms may be “mixed” upon the same patient, or a parent may have one, and the offspring the other. Pigmentary changes occur from possibly some impairment in functional activity of the vaso-motor system of nerves. The disease is not only hereditary; even atavism is shown by one case where the offspring (a girl) of one of a patient’s brothers, a stout, strong man in perfect health, married to a woman equally stout and healthy looking, took the disease at the age of eight years.—*Edinb. Med. Journ.*, Nov., 1878.

NERVE-STRETCHING IN ANÆSTHETIC LEPROSY.—Dr. E. Lawrie, of the Bengal Medical Service, reports in the *Indian Medical Gazette* for September, the case of a man, aged forty, who was admitted into the Medical College Hospital at Calcutta, on July 1st, with anæsthetic leprosy. On admission, there was complete loss of sensation all over the patch; the patient could only grasp feebly with the right hand; and the ulnar nerve was very much thickened from below the inner condyle of the humerus to about half way up the arm. The nerve was stretched the same day under chloroform. No regular notes of the case were taken afterwards. The patient attended very irregularly, and would never admit that his condition was improved, though the affected skin became visibly healthier. After a long interval, he presented himself on August 5th, and it is recorded that “the skin of the hand and forearm is uniformly healthy; sensation is perfect throughout the area that had been anæsthetic; and the thickening of the ulnar nerve has entirely disappeared. The patient admits that the tingling and pain no longer trouble him, and that his hand is much stronger.”

Dr. Lawrie has stretched the ulnar nerve in about thirty cases of anæsthetic leprosy. In every case the operation was followed by benefit, as far as the area supplied by this

particular nerve was concerned, which appeared to be permanent. The patients ceased attending the dispensary whenever the relief they experienced seemed to them decisive, and therefore no notes of their final condition were obtainable, except in the present instance — *Lond. Med. Record*, Nov. 15, 1878.

ANÆSTHETIC LEPROSY.—Tilbury Fox reports the case of a boy of seventeen, of English descent, born in Bombay. No hereditary taint. Disease began at the age of eleven as brown marks in patches on the body, limbs, face, hands and feet, without subjective symptoms. Previous health good. Treated by Dr. Bhan Daji with some essential oil externally and internally. After several months he became ill, his strength left him; his hands, feet and face swelled, and sores broke out upon his legs. He gradually recovered, and after two years seemed quite well, except some disordered sensation and numbness about the elbows and right ear. He then came to England, where he has always lived well, and the lepra, for about three years and a half, remained in a quiescent state. At present, he suffers from an acute recurrence of the disease (leprosis), beginning two or three months ago as a brownish discoloration about the cheeks and nose. These spots are now generally diffused over the skin, and are not mere maculations as in the former attack, but exhibit distinct structural changes in the skin texture. Other symptoms, as at first, of eruption, with slight deposit in skin, of nerve-lesion (knotty state of superficial nerve-trunks), and anæsthesia in circular blotches, dry, scaly and withered, with dirty white or faint red centres, and more conspicuous, reddish-yellow, well defined, semi-psoriatic-looking edges; bullæ also on the feet. The progress of these cases is always slower than that of those of the tubercular form. There is no specific for lepra. The disease may be ameliorated by the use of cashero, gurjun or Chaulmoogra oils. Patients should leave climates where lepra is endemic for temperate and bracing ones. Hygiene is of the greatest importance. Fox has faith in the value of quinine pushed to extreme doses, mineral acids and chlorate of potash, with gurjun oil infriected twice daily.—*Medical Times and Gazette*, Dec. 21, 1878.

CHAULMOOGRA OIL IN THE TREATMENT OF LEPROSY.—Dr. David Young reports six illustrative cases out of between fifty and sixty cases treated for leprosy at the Mission Hospital, Bombay, during eighteen months. The patients were all adults; the proportion of males to females about three to one. The treatment was by chaulmoogra oil alone, or combined with the tincture, internally, or a liniment, externally, of *psoralea corylifolia*—a leguminous plant abounding in the Konkan and Deccan. The forms of leprosy noted were: macular, four; anæsthetic, twenty-three; tubercular, fifteen; mixed, eleven. Out of the six cases reported, only one obtained no apparent benefit. The other five, after a treatment of from six months to a year, were all improved in health, with an increase in weight, and more or less new growth of hair. Dr. Young sums up as follows:

I. In the macular and in the early stage of the anæsthetic forms of leprosy, the chaulmoogra appears to be of decided value.

II. The oil should be given at the outset in small doses and gradually increased, as otherwise it is apt to cause nausea.

III. The good results were seen earlier in those cases in which the powdered seeds were given instead of the oil.

IV. A liberal milk diet seemed to be a valuable auxiliary.

V. The *psoralea* given internally, in combination with the oil, appeared to be of no value, but when applied externally in the form of a liniment, was of undoubted service, especially in stimulating the hair bulbs.

VI. Several of the cases treated were complicated with bronchial affections, which were quite relieved during the treatment. This, taken in connection with the fact that all the patients gained flesh, may point to the probable usefulness of the oil in affections of the chest.

VII. The oil has a deserved reputation in cases of itch and parasitic pedicula, and forms a valuable addition to the ordinary sulphur ointment.—*The Practitioner*, Nov., 1878.

INDIGENOUS LEPROSY.—Gaskoin alludes to fifteen cases of certain, probable or possible leprosy occurring indigenously in Great Britain since 1806; and shows his acquaintance

with the various pseudo-synonyms of this disease. The exciting cause of one of the cases he discovers to be a "too exclusive diet of bacon" on the part of the patient, "agreeably to the habits of his class in Wilts and the adjacent counties" (!) The diagnosis of another and a very doubtful case, was established by taking the patient's Bible into consultation. One case, than which "there never was an example more unmistakable," was in 1852, diagnosed by Addison as "spurious leprosy," whatever that may be; because, in spite of the fact, theory said "that leprosy could not happen in England." Gaskoin inclines to the antique belief in contagion; holds fast to the theory of diathesis; is dubious whether leprosy is a "disease or a dyscrasia still active among us;" suggests "something of identity" between leprosy and elephant-leg—"the two forms of elephantiasis;" he would refer "penetrating plantar ulcer to the category of *lepra anæsthetica*," and "is inclined to insist that certain cases, reported in England under the head of gangrene of the skin (and notably by Brodie), are no other than forms of 'leuce'" (?) And yet dermal histology will next year lack an exponent in the Royal College (! Rep.)—*Med. T. and Gaz.*, Jan. 26 and May 4, 1878.

MULTIPLE MELANOTIC(? Reporter) SARCOMA OF SKIN.—In the reports of the Toronto General Hospital occurs a very brief account of a case of multiple sarcoma. A man of sixty-four, reporting a cousin with cancer of the breast, noticed, thirty years ago (say in 1847), a black, pin-head sized papule an inch to the left of the navel. In the summer of 1876, it became as large as a currant. In the fall of 1876, it became chafed, "discharged blood and bursted through the skin," and increased in size, it having been cauterized. In the spring of 1877, it was strangulated with horse-hair, but grew again, uniting with three adjoining tubercles of a similar character, which also appeared at this time, to form one large tumor, which measured on November 20, 1877, 10x5x3.75 cm., was soft, fungoid, and, though non-discharging, was of a most offensive odor, causing even gastric disturbance. Slight lancinating pains at times. Early in October, 1877, some two hundred movable and immovable, hard, colorless tuber-

cles, from pea to cherry size, formed under the integument all over the body. "Those situated near the veins were of a pinkish color, and some of these have burst through the skin." General health otherwise good. The large tumor was removed by Dr. Aikens by means of the galvanic cauter, and the patient has since been progressing favorably without the aid of medicines. Portions of the tumor under the microscope showed the characteristic round and spindle cell formation of sarcoma in parts with some pigmentation. *Canadian J. of Med. Sc.*, Vol. III, No. 2, p. 57.

RODENT ULCER.—Thin has examined, microscopically, a cancerous ulcer of forty-three years' duration, combining the chief features characteristic of rodent ulcer, which was removed by excision by Sir James Paget, at which time it covered the whole scapula; and also a rodent ulcer, measuring 3x4 inches, removed with the knife by Mr. Marrant Baker. Under the border of the ulcer in both cases, and for a very small distance under the epidermis of the margin, clusters of cells separated the bundles of connective tissue, and grew more luxuriantly towards the surface. The clusters were largest in the upper strata of the cutis, and caused the progressive ulceration by obliterating the connective tissue and blood-vessels of the papillary layer. The centre was composed in each case of a substratum of unaltered connective tissue of the cutis covered by an amorphous substance containing blood-vessels and large numbers of colorless blood-cells. Sparsely scattered through this tissue were patches of the above-mentioned cell-clusters. In the sections examined, the only changes found in the rete mucosum, subaceous glands and hairs, were retrogressive, thus contrasting with what is found in epithelioma. Diseased sweat glands were not found. The results of these examinations show that in some, at least, of the cases distinguished by the name of rodent ulcer, we have to do with a special pathological condition having no near relation to epithelioma. Paget's case resembles the one described by Verneuil, in which the departure of morbid action was definitely traced to the sweat-glands; this and the evidences of a tendency to new cell formation in the sweat-glands observed in the former one,

point to the strong probability that the rodent ulcer of English surgeons, and the adenoma of the sweat-glands of the French surgeon, are one and the same disease.—(Reprint from the *Transactions of the Pathological Society of London*, for 1878.)

DIFFERENTIAL DIAGNOSIS OF MULTIPLE CARCINOMA AND OF SARCOMA MELANODES FROM GUMMA SYPHILITICUM.—Zeissl summarizes as follows* the distinctions between gummata and carcinomatous formations :

GUMMA SYPHILITICUM.

Most common on face and extremities.
Nodules frequently re-absorbed.
Ulceration frequent.
Microscope shows a scanty, mucilaginous, intercellular fluid. The tissue approximates to that of the embryonic state.

MULTIPLE CARCINOMA AND SARCOMA MELANODES.

Most common on trunk ; rare on face.
Re-absorption very rare.
Skin generally remains intact.
In multiple carcinoma, a white, black or speckled medullary mass. In sarcoma melanodes, elementary fibrous tissue loaded with pigment.

ART. VII.—**The Identity of the Cells found in Fluid from Cystic Tumors of the Neck, Scrotum, etc., with the So-called Ovarian Corpuscle or Drysdale Cell.** By HUGH M. TAYLOR, M. D., Assistant Demonstrator of Anatomy, Medical College of Virginia, etc., Richmond, Va.

Some cases have come under my notice recently which are, I think, just at this time interesting. A few weeks ago, Prof. Christopher Johnston, of Baltimore, Md., reported in the *Virginia Medical Monthly*,† that he had found in some fluid taken from a cystic tumor of the neck, cells very much resembling the Drysdale cell or the so-called ovarian cell. Shortly after reading this report, I was called upon to remove a tumor from the neck of a colored woman, which proved to be fibro-cystic in character. Wishing to ascertain if it contained any cells or corpuscles which resemble those usually found in the ovarian fluid, I sent some of it to Mr. Hugh Blair, of this city, accompanied with the request that he would submit it to a microscopic examination. Mr. Blair reported that there was a very striking resemblance between the cells he found in the fluid I gave him, and those usually found in ovarian dropsy.

*Reprint from *Annual Report of the Vienna Gen. Hospital*, for 1877.

†April, 1879, *Baltimore Academy of Medicine Proceedings*.

A few days ago, I assisted Prof. Hunter McGuire to remove a testicle which had undergone cystic degeneration. I also obtained and sent a specimen of this fluid to Mr. Blair, and requested him to examine it. He reports that the resemblance between the cells found in the fluid from the cystic diseased testicle, to those found in ovarian dropsy, is even more striking than they were in the first specimen I gave him; and that if there are any characters sufficiently distinct to differentiate them from the Drysdale cell, he is, at this time, unable to point them out.

Mr. Blair has for some years made the subject of microscopy one of special study, and has examined a good many specimens of fluid from ovarian cysts, and has had ample opportunity to render himself thoroughly conversant with their appearance. He informs me that the fluid is perfectly preserved by means of hydrate of chloral. He has shown the specimen of fluid to a number of gentlemen who are interested in the subject of pathological microscopy, and will be glad to show it to as many more if they will call upon him. He mentions it as a strange fact that the blood disks are shriveled, while the granular bodies are perfectly preserved and retain their natural appearance. Some of them are seen to be broken, but the pieces retain their distinctiveness and break as if they possess considerable tenuity. Instead of finding a few cells as in ovarian fluid, this cystic fluid is full of them. The only other products found in the fluid were free granular matter and blood disks.

In starting this investigation, Prof. Johnston will, I am sure, add much to his already enviable reputation by refuting the idea which has so long prevailed—viz: that these cells are alone to be found in cystic degeneration of the ovaries, and are therefore pathognomonic of ovarian dropsy. It may be shown that they are only to be found in a peculiar cystic degeneration of special glands. I think this hypothesis highly probable, since we have only found them in the tumors about the neck where glands are abundant, and in the ovary and testicle—analogueous organs; but I hardly think they will again be claimed as being peculiar to ovarian dropsy.

Clinical Reports.

Procidentia Uteri—Replacement—Removal of Large Calculus by Forceible Dilatation of Urethra. By D. CUNNINGHAM, M. D.,
Wurtemberg, Pa.

In July, 1877, I was consulted by Mrs. G., a German lady, aged 63, in reference to a uterine difficulty and frequent and painful urination. Upon inquiry and examination, I found complete prolapsus of the uterus of 10 years' standing in the shape of a large unsightly mass hanging midway between her thighs covered with abrasions, excoriations and fissures—the portions of the thighs lying in apposition being raw from constant friction in walking. The purulent sanies discharge from the surface of the uterus and parts adjacent were intensely foetid. She stated she had consulted various physicians, one of whom advised amputation of the organ. She had carried the uterus in a sack of muslin suspended by straps of muslin running over each shoulder, and attached to the sack (before and behind) for years. I advised rest and the daily use of baths of carbolized tepid water; and after having cleansed the parts, to apply carbolized oil on lint (1 part of carbolic acid to 40 parts of sweet oil) to promote healthy granulation in the parts. My directions were faithfully carried out on her part.

On the 13th of *September*, 1877, these remedies had produced such a favorable change in her condition that I felt justified in making the effort to restore the organ to its normal position in the pelvis. Having thoroughly lubricated the parts, and placing the patient in the knee-chest position, I readily succeeded. Then I applied a Shannon supporter, and left my patient as comfortable as could be expected.

Sept. 14, I was summoned to see her in great pain, as she thought, from the presence of the cup of the supporter. I soon ascertained that such was not the case, but that the suffering was caused by an enormously distended bladder and inability to void urine for over 36 hours. On my endeavoring to relieve her by using the catheter, the instrument met with some solid substance lodged in the urethra about one inch from the meatus, which effectually prevented the egress of the pent-up urine, and also the introduction of a catheter into the bladder. This substance gave a distinct metallic sound on being struck with the point of the catheter. Hence I concluded that it must be a calculus which had formed in

the bladder, and in the prolapsed condition of the uterus the fundus of the bladder had been also dragged down into the pelvic cavity; the uterus being restored to its normal position, the bladder had likewise been restored to its normal position, which allowed the calculus to drop and become lodged in the urethra. Reasoning in this wise, my next thought was how to get it away. I took a pair of polypus forceps and gradually dilated the parts until I could obtain a hold upon the substance, and gently withdrew what proved to be a calculus five-eighths by seven-eighths inch in its diameter, oval in shape. Following the removal of this, there was an immense discharge of urine. Some slight irritation remained, requiring the use of the catheter for a few days. And now the old lady remains well and in the enjoyment of excellent health, with no return of either uterine or urinary trouble. She still, however, wears her supporter with comfort as a safeguard.

Two Remarkable Cases of Pistol Shot Wounds of the Head.

WM. H. BRAMBLETT, M. D., Newbern, Va.

CASE I.—I was called hurriedly, April 11, 1876, to J. D. T., æt. about 24 years. He was a law student, and intellectually very bright; of an eccentric temperament, and had been an inmate of an insane asylum. After a spell of alcoholic dissipation, to which he was addicted, in a moment of mental aberration or desperation, he placed the barrel of the smallest sized Smith & Wesson pistol in contact with his forehead and fired. It was found, upon examination, that the ball had penetrated the skull exactly in the median line, and loose pieces of bone, detached from the inner table of the skull, could be detected with the probe. To remove the lower pieces of bone, and, if possible, the ball, trephining was at once determined upon. I was assisted in the operation by Dr. Jerry Farmer, who happened to be in Newbern at the time. An incision was made, the integument and cellular tissue dissected up from the skull, and a $\frac{3}{4}$ -inch trephine inserted, so that the lower limit of the orifice made by the ball constituted a part of the section made by the instrument. The ball had passed between the two lobes of the cerebrum at their extreme anterior inferior limits, injuring the membranes on each lobe, but not the brain substance, so far as vision could detect. The inner table of the skull was considerably fractured; two pieces of bone—one one-quarter of

an inch each way, and about the thickness of the inner table, the other half an inch by one-quarter inch, and containing a part of the ridge leading from the crista galli of the ethmoid bone, and known as the frontal crest—were removed from near the point from which they had been detached. The third piece, and the largest of the three, was driven in to the right, and beyond the anterior border of the crista galli process of the ethmoid bone, from which position it was removed. It was blackened by powder, quadrilateral in shape, and nearly half an inch each way in size. When it was removed, venous blood welled up profusely from, I presume, the superior longitudinal sinus, and I apprehended trouble; but a few applications of a sponge, wrung out of ice water, arrested the flow. The ball seemed to have impinged against the anterior border of the crista galli process and deflected to the left, beyond which point it could not be traced. The wound was properly dressed and quiet enjoined. He was given gr. xxx bromide of potassium every three hours, morphia sulphate and chloral to relieve pain and produce sleep. The bromide of potassium was kept up thirty hours, when, decided symptoms of bromism appearing, the dose was diminished. Cold was applied to the head, and the temperature in the axilla did not rise above 101°F. The third day after the reception of the wound, while straining at stool, the patient had a gush of blood from the wound, which was controlled by cold and pressure, and the patient forbidden to strain on such occasions. He was convalescent in about three weeks without any further untoward symptoms.

REMARKS.—The question now naturally arises, What was the course of this ball, and where did it lodge? If it had continued on in its course, it must have produced instant death. Its lodgment within the cranium would probably have been attended with serious results. The ball, after penetrating the skull and being deflected to the left by the crista galli process of the ethmoid, most probably passed downward and backward through the cribriform plate of that bone, and lodged in the muscles, on the left side and posterior part of the neck, near the base of the skull, as the patient complained of soreness in that region upon motion and under pressure upon the parts. There was a discharge of bloody mucus from the naso-pharyngeal space for several hours after the infliction of the wound, but by pressing the soft palate up, no injury could be detected. A profuse

flow of blood from the nose followed the infliction of the wound, but whether it came from a wound in the naso-pharyngeal space, from the frontal sinuses, or from the mere concussion produced by the discharge, could not be satisfactorily determined.

Dr. Samuel Sayers, of Wytheville, saw the case with me the day after the wound was received, and concurred with me in the propriety of the operation, and assented to the course of treatment pursued. The patient enjoyed uninterrupted health—at least, so far as anything proceeding from the wound was concerned—until his death, which occurred last fall, from a railroad injury, in a town west of this. No *post mortem*, to verify the position of the ball, was made.

CASE II.—I was sent for, February 18, 1877, by Dr. F. Clark, of Snowville, Pulaski county, Va., to see E. L. B., *æt.* about 22 years, and by occupation a merchant. I arrived about 10 P. M., and was made acquainted with the following facts in the case: The patient, in passing a small Smith & Wesson pistol, breech foremost, into the hands of another young man, was shot in the right eye by the accidental discharge of the piece. The ball entered the upper lid about three-eighths of an inch from the ciliary margin, then the eye-ball just above the corneal margin, and, continuing in its course, passed out of the globe just above the insertion of the optic nerve. These facts could, only in part, be known before the enucleation of the globe. When I reached the patient, the globe was collapsed, and resting on the cheek. A probe could not be made to trace the course of the ball, and, to make a full diagnosis, if possible, in the case, the remains of the globe were removed by, first, carefully incising with a small pair of seissors, the attachment of the conjunctiva to the corneal margin, then the cellular tissue and the muscles were hooked up and divided, and the section of the optic nerve, with a curved pair of seissors, completed the operation. The conjunctiva was intact, except at the point where the ball entered. The collapsed globe was carefully opened and examined. The ball barely opened into the anterior chamber—notching the periphery of the iris slightly, making a clean cut posteriorly through the coats of the globe, leaving a small bridge of the different coats of the globe a little less than half an inch wide. My little finger was carried down through the conjunctiva, and deeply into the orbital cavity, and search carefully made for the projectile, or for

the point of its emergence from that cavity; the bony plates forming the cavity were carefully explored, down to the emergence of the optic nerve, but no ball nor injury to the bones could be found. No paralysis existed. The patient complained some of his head, for which he had a dose of morphia sulphate, and a prescription similar to that used in Case I. The next morning, I made a grave prognosis, and left the patient in the care of Dr. C., who was to notify me if serious symptoms arose. I saw him again on the third day after the wounding, and found his temperature 100°F., and doing well; he was sleeping a good deal from the potassium bromide, the dose of which was diminished. He recovered without an unfavorable symptom, and was married the following fall.

REMARKS.—My manipulations were carefully conducted, and I am satisfied the ball was not in the orbital cavity, nor could it have fallen out during the operation. The supposition that the ball rebounded and came out through the track it had made in entering, is untenable; for the force of the pistol will carry a ball through an inch pine plank with ease, and, then, when the ball had passed out of the globe through the posterior tunics, it had an inverted funnel through which to make its way out, to say nothing of the instantaneous collapse of the globe, and the consequent approximation of the wounded edges together. The force with which the missile was projected would easily have carried it through all the tissues it was known to have traversed, and also through any of the bony plates that form the boundaries of the orbital cavity. In this case, the ball was the same size, and the pistol exactly like the one that Case I used upon himself, and in which case the ball passed through the frontal bone, and, presumably, through the cribriform plate of the ethmoid, and probably impinged against the sphenoid, and traversed the soft tissues to the postero-lateral muscular region of the neck. Certainly, in this latter case, it could not have been for want of force if the ball did not penetrate the brain. After having traversed the globe of the eye and emerged from its posterior surface, the ball, to have got out of the orbital cavity—granting that it did not rebound and come out at its orifice of entrance, which I regard as almost impossible, or by fracturing its bony walls—must have passed through the sphe-

noidal fissure into the cavity of the cranium, or been deflected downward by impinging against the roof of the orbit, through the sphenomaxillary fissure. If this latter had been the case, I would have detected the denudation on the orbital plate of the frontal bone; and to have passed down through this fissure, arguing from analogy, soreness would have been detected over the region of the lodgment of the ball, as happened in Case I; none, however, could be detected in this case over the molar and temporal regions. Then, after having traversed the globe of the eye and the cellular tissue lying behind, where else could the ball have gone than through the sphenoidal fissure and into the cranial cavity? The calibre of the pistols used in both cases was $\frac{2}{10}$ ths of an inch.

Original Translations.

From Spanish and French. By CHAS. R. CULLEN, M. D. (P. O., Richmond, Va.), Hanover county, Va.

Treatment of Ozæna.—(A summary made by Dr. V. Cozzolina, in *Giornale Internazionale*, Naples, Sicily.) The practice of different practitioners differs somewhat in the treatment of ozæna. Cazenave prefers the solid nitrate of silver, or a strong solution of the same, as 20 centigrammes of the silver salt to 360 grammes of distilled water. Internally, he administers potassium iodide, 8 grammes, and Huxham's tincture of bark, 250 grammes. [Dose of the mixture, one to two teaspoonfuls=4 to 8 grammes.]

Dr. Brolee's treatment is about the same, differing mainly in the quantities of the several medicines used.

Trousseau recommends the inhalation, or rather the inspiration of tobacco dust and different local applications, such as bismuth subnitrate, chlorate of potash, white and red precipitates, besides syringing with warm or cold water. He also retains the mercurial powder, and, when these fail, he uses in addition, silver nitrate, zinc sulphate, etc.

Dr. Prospero uses both local and constitutional treatment. He recommends sea salt, chlorate of potash, carbonate of soda or other alkaline remedies. Permanganate of potash is,

however, his preference. Iodoform is sometimes efficacious, as are also iodide of soda and iodide of lime.

The *Gaceta Médica de Catalinía* contains a report from the Berlin *Klinik*, Nos. 2 and 3, 1879, of "Happy Cures of Four Cases, Supposed to be Incurable."

I. Acute Glaucoma in a woman 49 years old. She was treated by injections of corrosive sublimate in the nucha, and by frictions with glycerin, 100 parts, and iodine, 1 part. The injections were continued daily for two weeks, and then every other day for three weeks, when they, as well as the frictions, were discontinued. This inoffensive treatment cured the disturbance of the vitreous body, and restored sight.

II. Amaurosis Cured by Meningitis.—A youth 19 years of age had complete amaurosis of the right eye and partially of the left which was cured by an attack of acute meningitis. The treatment consisted in the application of one electric pole to the nuchæ, and the other pole to the forehead—each sitting lasting from three to five minutes daily. In ten months, the sight was entirely restored.

III. Collapse and Threatened Paralysis of Lungs.—A captain of a steamer, aged 47 years, who had been down with small pox for three weeks, suffered sudden collapse, with imminent paralysis of the lungs. An infusion of senna in sulphate of soda, administered every two hours, produced speedy relief, and after taking the fourth dose he was well.

IV. Coma from Bright's Disease.—Reyber was called to a woman with Bright's disease, aged 50 years, whom he found apparently moribund—almost pulseless, and with very cold extremities—and stertorous breathing. Believing that liquid could yet be swallowed, he ordered infusion of senna with salts. Although he expected on the next day to hear of her death, he found her improving and in her senses, and after a short while she was completely cured.

Treatment of Dysentery by Indian Barley.—Dr. Romanos, of Cairo, refers in the *Berlin Klinik* to fourteen cases of dysentery treated by the dust of Mirobalanos, known among the Arabs by the name Indian Barley (*Sciari Hindi*). In all these cases the cures were rapid, and the remedy had no secondary disagreeable action, being perfectly tolerated by all the sick ones. The daily quantity was two grammes (30 grains) to children and four grammes to grown persons—in four doses. When five grammes were given adults, the medicine purged. The medicinal principle is tannin, and can be obtained of Gehe & Co., Dresden.

Alcoholic Drinks in France.—At a meeting of the *Académie*

de Paris, to consider the question of drinking spirituous liquors, it was voted that wine of the strength of 10 or 12 per cent. was the natural and best drink for all people; that brandy is too enervating, especially fabricated brandy, and other alcoholic drinks, and to substitute wine for brandy and whiskey, by legislation, if possible, was the best course to pursue.

Hereditary Singularities.—Senor Englen presented the peculiarity of six fingers on each hand, and six toes on each foot in the first generation. In the second generation no irregularity. In the third, six toes on each foot. In the hand there were only the middle and ring fingers. In the fourth generation, six fingers and toes on each hand and foot. In the fifth generation, three boys and one girl had natural number; but in the next girl, there were six fingers on left hand, and only the middle and ring fingers on right hand. In the sixth generation, one daughter with six fingers, who had five children, one of whom had two thumbs on each hand.

Proceedings of Societies.

Baltimore Academy of Medicine.

Salivation of Pregnancy—Case Relieved by Belladonna—Another Case Relieved by Death of Fœtus—Another Case Relieved by Viburnum Prunifolium.—Dr. J. D. McKew mentioned a case of excessive insalivation in a pregnant woman. Having exhausted all other means of controlling this annoying complication, he eventually stopped the excessive discharge by the use of *belladonna*, kept up for three weeks.

Dr. P. C. Williams stated that one of his lady patients had exhibited this symptom to a most annoying degree. She seemed to have excessive salivation from the day of conception, and in spite of all treatment, including belladonna, it continued until she was relieved by labor. In this case, he spoke within bounds when he referred to quarts of saliva discharged in the twenty-four hours. This secretion continued when the pupils were dilated, and the throat felt parched from the physiological action of belladonna. For three successive pregnancies, this annoying symptom had shown itself. In one of the pregnancies, the fœtus died at the fourth month, but was carried to term, when a four months' child was born without decomposition, but bleached as if it had

been kept in alcohol. The insalivation stopped with the *death of the child*, and did not return, notwithstanding the presence of the foetus in utero.

Dr. B. B. Browne mentioned that, having failed in securing relief for one of his patients from belladonna, he had succeeded in checking the profuse salivary secretion by means of *viburnum prunifolium*. He considered its action to be a uterine sedative, allaying reflex irritation, and in that way stopping the inordinate salivary secretion.

Belladonna as a Scarlatinal Prophylactic.—Dr. P. C. Williams desired to draw the attention of the Academy to the good effects which he thinks he has derived from the use of belladonna as a protecting agent against the spread of scarlet fever. Formerly, when he gave belladonna in small doses, as it is usually prescribed, he saw no good results whatsoever from its administration. For some months back, he has pushed it in morning and evening doses, large enough to excite a reddened skin. In several large families of children in which a case of scarlet fever had accidentally occurred, he had prevented all spread of the disease by adopting this practice.

Dr. F. Donaldson had seen scarlet fever invade the system when the patient was under the influence of belladonna, and therefore had abandoned the remedy as useless for prophylaxis.

Dr. T. Murdock had charge of an institution in which a large number of boys were collected. In spite of belladonna administrations to the well, a great many cases of scarlet fever had occurred in the establishment.

Dr. J. D. McKew's practice was largely among the families of mechanics, in which a number of children are crowded in small houses, with very defective hygienic regulations. From his large experience, the rule is that individual cases do occur—the majority of children in the household escaping even when no precautions are taken for isolation. These instances are so very numerous as to take away all supposed protection from any prophylactic. In families of six children, one would take the disease and five escape. What better prophylactic effect could you have from any remedy than from this negative treatment?

During the general discussion which ensued in the Academy in relation to the *vagaries of scarlet fever extension*, it was clearly brought to light that while belladonna enjoyed a certain reputation as a preventive of scarlet fever extension, the sudden appearance and as sudden absence of the disease from

a household would throw much discredit on the protective value of any remedy.

In proof of the position assumed by Dr. McKew, he reported a case which had very recently occurred in his practice. One of a family of seven children was seriously attacked with scarlet fever. When he had convalesced, a second son was seized with high fever, and in twenty-four hours an eruption appeared upon his skin, which was supposed to be scarlet fever, and hence the doctor was called in. The family belonged to the laboring class, and occupied a very small, cramped house. The children had to sleep together, and this little fellow was found in the bed which the convalescent case of scarlet fever had vacated. The eruption proved to be urticaria, and, under treatment, promptly disappeared. Neither this child, nor did any of the others take the disease, nor was any attempt at isolation used for the remaining five children. In another instance, Dr. McKew had under treatment a child in a well-to-do family, with ample space in their dwelling. The child had been suffering from bronchial trouble with diarrhœa. When he had improved sufficiently to be allowed the freedom of the house, an elder brother was attacked with scarlet fever, of which he eventually died. A thorough quarantine was at once established, and the convalescing child was kept in a distant part of the house, with a nurse exclusively for himself; notwithstanding which, this isolated child in time became œdematous with albuminous urine, which was traced by the physician to scarlet fever poisoning.

Dr. Winslow mentioned that, when practising in the eastern portion of North Carolina, in a county consisting of long strips of land between water courses, and therefore plantations thoroughly insulated, he has often seen a case of scarlet fever make its appearance in a family when the children had not left the farm, and when no case of scarlet fever had been heard of. He had also seen the inroad disappear with a single case, and therefore believed that the disease under certain conditions was of *spontaneous origin*, under which circumstance it was not contagious.

The census of the Academy having been taken, it was found that the majority of physicians present had never had scarlet fever either in their boyhood nor since grown, although so constantly exposed to its influence.

Uræmia of Pregnancy Relieved by Phlebotomy.—Dr. A. Arnold reported two cases of uræmic poisoning in pregnant women which he had relieved by liberal phlebotomy. In

one case the coma had lasted eighteen hours; and in the other—a primiparous woman eight months pregnant—the urine was found loaded with tube casts as well as with albumen. The prompt relief which these two patients obtained from the free bleeding induced Dr. Arnold to adhere to Traube's view—that uræmic poisoning was due rather to œdema of the brain than urea in the circulation.

Pilocarpin for Iritis.—Dr. J. J. Chisolm reported very prompt action from the hypodermic administration of the nitrate of pilocarpin in a case of traumatic iritis, sequel of cataract extraction. The introduction of one-sixth of a grain under the skin produced profuse sweating, which lasted for six hours. This was accompanied at first by much salivation, but by no nausea. Sleep was induced by the sweating, from which the patient awoke quite relieved of pain, with the condition of his eye very much improved.

Glaucoma in Man aged Twenty-eight Years.—Dr. Chisolm also reported a case of blindness from glaucoma in a young man aged 28. He had been blind for four years, and now had remaining only the perception of light from each eye. The ophthalmoscope revealed deeply pitted white discs—an evidence of long standing and incurable disease. Glaucoma is very seldom seen in so young a person. Usually it attacks persons well advanced in life. In giving his history this feature was elicited, viz., that this peculiar disease of blindness, with brilliant, black, dilated pupils, belonged to his family, and had often been a topic of family discussion. His mother was blind with the same disease; also her father, and he had been preceded in this unfortunate condition by his mother. So that the son, the mother, the grandfather, and the great grandmother, had all become blind from glaucoma—the sexes alternating with each generation. There were other relatives blind with the same disease.

Panophthalmia in Fœtus.—Dr. Chisolm also reported a child three months of age, who had been born, as the parent stated, without eyes. Upon separating the lids by an elevator, the atrophic stump of an eyeball was found in each socket, identical with the cases of shrinkage of the eye from panophthalmitis and corneal sloughing in the adult. The child had evidently suffered with destructive inflammation of the eyeballs while in the womb. This case is mentioned in proof that the fœtus is not safe from eye diseases even when hid away within the mother.

Successful Cataract Extraction in an Unpromising Case.—Dr. Chisolm also reported a successful cataract extraction in

a lady patient weighing nearly 400 pounds. On account of her excessive plethora, the anterior chamber became filled with blood, making it very difficult to cleanse it before the lens was removed. For fear of inflammation, the patient was kept under the full effects of opium for two weeks. She had an uninterrupted convalescence, and did not suffer a moment's pain after the day of operation. At the expiration of fourteen days, she could read ordinary print, in evidence that a perfect success had followed upon the cataract extraction in so unpromising a patient.

Richmond Academy of Medicine.

(Reported by Chas. S. Brittan, M. D., Secretary.)

March 18. Aneurism-Thrill not Essential for Diagnosis.—The President, Dr. M. L. James, exhibited a large aneurismal tumor which he had removed from the ascending aorta, just above the pericardium. The patient, some year or so ago, had been cured of a large femoral aneurism by ligature applied in Scarpa's triangle. The thoracic tumor contained a large mass of fibrinous coagula. The sternum and the first ribs were markedly elevated by the growing aneurism, but there was no appearance of absorption of the bones from the pressure. No aneurismal thrill was perceptible during the life of the patient—a sign upon which much stress is laid for diagnostic purposes—some even asserting that a large aneurism cannot exist without a distinctly audible thrill. But Dr. James has so frequently noticed the absence of the so-called thrill when aneurism was really present, that he is willing to declare its presence or detection unnecessary for the diagnosis of aneurism. He further incidentally remarked that a simple pulsating tumor could not be accepted as indicating the presence of aneurism, but pulsations with expansive movements of the tumor are diagnostic of aneurism.

Prescription for Cardiac Dyspnœa.—Dr. W. W. Parker stated that he had on several occasions given prompt relief to the distressing symptoms—so often sudden in their onset—of cardiac dyspnœa, due to organic disease of the heart, by the use of the following prescription:

R Ammonii valerianas.....5ss
Tinct. digitalis.....5ss
Tinct. verat. viride.....minims x

M. S: One dose.

Cases of Embolism.—Dr. J. S. Wellford reported a series of cases in which the symptoms clearly indicated the exist-

ence of emboli, although, as the patients recovered, their presence could not be established by actual demonstration. The first was a case of phlegmasia alba dolens, in which the leg was very much swollen and disturbed by the characteristic infiltration. On two separate occasions, at an interval of several weeks, the patient was suddenly taken with violent pain in the præcordia, great difficulty of breathing, a congested, cyanotic appearance of the face, but which, after a few minutes, was relieved before the doctor could reach her bedside. On each occasion, she was taken on the next day with a circumscribed pneumonia, which ran a regular course, and terminated in recovery. The patient had a temporary impairment of the use of the limb, but finally was entirely restored.

The second case was also a lady in her confinement. She was attacked some days after delivery with violent pain in the right iliac region, and which finally culminated in phlegmasia alba dolens of the right leg. Under appropriate treatment, this was relieved, when the other limb became affected, and there was even more extravasation than in the other extremity. About the time that this was being relieved, she was, like the previous case, suddenly taken with difficulty of breathing, pain in the cardiac region, and congestion of the face to such a degree as to cause the attendants to fear her immediate dissolution. Two days afterwards, she presented evidence of a circumscribed inflammation of the right lung which was relieved by a blister, etc., but terminated by expectoration.

The third case was of a different character. A lady, about 60 years of age, with slight valvular disease, was suddenly taken at night with most intense pain in the calf of the leg, which lasted for some hours, and required large doses of opium, chloroform, etc., before relief could be obtained. Living some distance in the country, she was not seen for two days afterwards, when the foot was cold, and no pulsation could be detected in the posterior tibial or dorsalis pedis arteries, and he feared gangrene of the entire foot. But the collateral circulation was gradually restored, and finally only the toes became mummified, and will ultimately require removal. The line of demarcation has not been fully established as yet, although it can now be satisfactorily determined that the circulation has been perfectly established in the rest of the foot.

The sequence of events was so clearly established in all three of these cases that the Doctor thought there could be

no reasonable doubt that the attacks of pneumonia were caused by emboli becoming detached in the leg, which were carried on in the current of the circulation, temporarily clogging the pulmonary artery and blocking up the artery supplying a limited portion of the lung, and being finally expelled by inflammation and suppuration. In the case of gangrene, the connection of cause and effect was so apparent that no other explanation could be satisfactorily entertained, except the one that an embolus had become detached—most probably from the heart—which travelled down the arterial circulation and became locked in the posterior tibial or peroneal artery—thus cutting off the circulation in the portion of the limb below the point of occlusion. The collateral circulation became gradually restored, but not in time to save the toes which became mummified.

Syphilitic Phthisis —Dr. George Ross reported the following case: M. L. R., white, widow, aged 30, has been under professional observation and treatment for several years. First, during the interregnum between her life as the kept mistress and wife of the man whose widow she now is, for the cure of a long-standing dysmenorrhœa. Two members of her family have died of consumption. During her *married* life she was in perfect health, and after her abandonment by her husband, she grew very stout, weighing about 160 pounds. Two years from this date, her health began to fail, and every appearance of incipient phthisis developed. A constant cough set in, accompanied by abundant morning expectoration, thoracic pains, loss of appetite, sleeplessness, night sweats and rapid emaciation. Auscultation revealed prolonged expiratory respiration, bronchial breathing, some mucous râles, etc. For this condition, she was treated with counter-irritation, inhalations, acids, iron, bark, beer, whiskey, diet, exercise, and the most diligent and long tried, because believed in, administration of cod-liver oil with hypophosphites of lime and soda. She grew constantly worse—other and graver symptoms developing themselves. She had complete aphonia, headache, pain localized in the neighborhood of occiput, double distant vision, uncertain gait, insecurity of step, tottering or falling about, and culminating in a partial paralysis of the left side of the face, tongue and arm, which latter symptom, however, disappeared in a few days.

In view of the progressively increasing severity of the symptoms, notwithstanding the most active and anxiously watched anti-phthysical treatment, I began to cast about in my

mind for some explanation of her failures to respond to the agents which were usually potent to palliate if not arrest the rapid downward progress of such sufferers; and I sought, in her *early* history, grounds for attributing this failure to some latent and unrecognized *specific* cause. I remembered the dissipated, dissolute habits of her friend and husband, but she denied ever having had chancre or bubo, or eruption of any kind, or enlargement of the post-cervical glands, or tibial or other osseous pains. Still, it was possible for her to have primary sores and recovered without the knowledge of their existence; so I determined to revolutionize a treatment which had been faithfully adhered to for more than a year, and had been wholly insufficient, and give myself the benefit of the suspicion which possessed me. I abandoned every previous agent except the cod-liver oil, and on May 1, 1878, directed this formula:

R \acute{y} . Hydrarg. chlorid. corros.....grs. iiss
 Potass. iodid..... $\overline{5}$ ss
 Ext. stilling. fluid..... $\overline{5}$ j
 Syr. sarsaparill. comp..... $\overline{5}$ j
 Tinct. cinchon., comp., ad..... $\overline{5}$ iv

M. ft. sol. et sig: One teaspoonful three times daily, after meals.

The result seemed magical. In less than ten days, my patient could speak as comfortably and as plainly as ever in her life; the cough and headache and aphonia had entirely disappeared; her vision was perfectly restored, and her gait became as steady as ever. When she had exhausted the second bottle, I sent her out of the city to visit some friends, directing the continuance of oil and iodide of potassium only. She was absent three months, during which time she took an ounce of potassium iodide and one ounce of dialyzed iron. Two months ago, she returned, and was in my office to-day looking and feeling perfectly well and weighing 125 pounds. I shall direct the continuance of the potassium and oil for some months, that the nail which seems to be secure may be clinched.

Another Case of Syphilitic Phthisis.—Dr. J. N. Upshur said that he was treating a colored woman whom he had been called to see some weeks ago, suffering with catarrh, which was soon relieved. He was again called some ten days afterwards, when he was surprised to find her ill, and, to all appearances, in the last stage of acute tubercular phthisis. Physical examination showed extensive disease of the lungs, but there was no cavity. She had distressing cough, profuse purulent

expectoration, night sweats, and slept badly; there was also rapid pulse and great prostration. She was put on iron and cod-liver oil, which was found not to benefit her at all. At a later period, the fact that she suffered much at night with pain in the chest, which simulated the characteristic nocturnal pains of tertiary syphilis, and remembering that he had 18 months before treated her for syphilis, she was put upon scruple doses of iodide of potassium, and 5j syrup of sassa-parilla three times a day. In ten days, she looked like a new woman, and was fast recovering her strength; the cough and all other symptoms were better, nocturnal pains had disappeared, and she was able to be up and dressed.

The Doctor referred to a report of a similar case by Dr. A. Fournier (*Amer. Jour. Med. Sciences*, January, 1879, p. 255), and stated that he believed that his patient was suffering from syphilitic phthisis. Reference to the above article, will give Dr. Fournier's observations in a condensed form.

Guaiaicum for Hæmaturia.—Dr. J. Grattan Cabell stated that the members of the Academy will remember that a few meetings ago Dr. J. N. Upshur reported a case of hæmaturia cured by guaiaicum. During the past fortnight, Dr. Cabell had a case in which the same remedy was effectual. The urine was not albuminous, but contained urates and blood corpuscles in abundance. The patient's family was gouty. Benzoic acid and biborate of soda were first used to relieve the hæmaturia, but without any notable benefit. Then remembering Dr. Upshur's suggestion, he resorted to drachm-doses of tincture of guaiaicum every four hours, and with the most positive and speedy relief of the trouble.

American Medical Association.

First Day.—The thirtieth annual session convened in Atlanta, Ga., 11 A. M., May 6, 1879. The President, Dr. Theophilus Parvin, of Indianapolis, in the chair; Dr. Wm. B. Atkinson, of Philadelphia, Secretary.

After prayer by Rev. Dr. D. W. Gwinn, pastor of the First Baptist Church of Atlanta, and the Address of Welcome by Dr. Joseph P. Logan, and the announcements of registrations, members by invitation, election of permanent members, invitations, reading of letters from absentees, etc., Dr. Parvin delivered the President's Address. After some general introductory remarks, he asked, Why did medicine exist? Born of human sympathy, it sprang to life in response

to human suffering. According to Alexander Bain, "Pain expresses an ultimate fact of human consciousness—a primary experience of the human mind resolvable into nothing more general or fundamental than itself." But greater than the mystery of pain or of life was the mystery of death. After some unsatisfactory suggestions as to "what is man?" Dr. Parvin then detailed some generally known facts regarding heredity. He then referred to the general belief that man has a dual nature—physical and mental. He does not think that all the mysteries of life can be regarded as of a physico-chemical character; but, as Beale has expressed it, we must regard the "idea of vital power as super-physical," and hence referable to a living Creator. But a "complete conception of man includes mind." Attempts to interpret mental phenomena by physical laws must fail. The doctrine of teleology commends itself to the consideration of the medical profession. "Accepting gratefully all facts of science, we should beware of rejecting all that might not be capable of mathematical demonstration, and thus compel our assent by absolute necessity."

On motion of Dr. Wm. Brodie, of Detroit, thanks were voted Dr. Parvin for his eloquent address, and a copy was requested for publication.

Under call for voluntary papers, Dr. Lewis A. Sayre, of New York, presented a paper on the treatment of spondylitis by plaster of Paris jacket, which, on motion, was referred to the section on Surgery.

Dr. E. Seguin, of New York, presented a paper suggesting the adoption of the metric system by the Association, with a resolution to that effect. On motion, consideration of the proposed resolution was deferred until Thursday.

The Section on medical jurisprudence, chemistry and psychology was consolidated with that on State medicine and public hygiene, and the consolidated section termed number IV.

Second Day.—On motion of Dr. W. B. Atkinson, congratulations were telegraphed Dr. J. A. Morton, of Columbus, Ohio, who has been indefatigable in securing a State law providing for dissecting matériel.

On motion of Dr. A. C. Post, of New York, N. Y., 5,000 copies of the President's address were ordered to be printed and distributed among members of the Association.

Dr. Fricke, of Philadelphia, Pa., by authority of the Philadelphia County Medical Society, presented a resolution to petition Congress not to remove the duty upon quinine. Tabled.

Dr. Roberts, of Nashville, offered a resolution petitioning Congress to do away with import duty upon cinchona or its alkaloids. Adopted.

The Address on the Practice of Medicine was read by the Chairman of the Section, Dr. Thomas F. Rochester, of Buffalo, N. Y. In regard to yellow fever, he thinks it never originates except in its primal birth-place—the West Indies. It is not contagious except through other media than individuals. Strict quarantine is the only hope of safety. He advocated the establishment of a National Health Bureau. In regard to *typhoid fever*, he said Dr. Austin Flint, Sr, about 35 years ago, announced that the disease could be propagated by drinking water. Ice is also a means of propagation. In referring to sewage, etc., he remarked that sewers should not be allowed to empty into running streams. Allusion was made to various phthisical sanatoria. The Address was referred to the Section on Practice.

Dr. J. J. Woodward, U. S. Army, read the address of the Chairman of the Section on State Medicine and Public Hygiene—Dr. John S. Billings, U. S. Army—who was too unwell to undertake the reading. Little or no decided advance has been made in arriving at the causes of diseases or the means of arresting their effects. This Association should give success to the law which created the National Board of Health. The causes of lack of interest on the part of physicians generally in public hygiene are, 1, deficient scientific knowledge; 2, distrust of the ability and motives of some who occupy prominent positions as sanitarians. This distrust naturally follows from the inevitable relations which exist between sanitarians and politicians. In regard to mortuary statistics, he stated that Gen. F. A. Walker, the Superintendent of the Census, would soon issue blank registration books to every physician in the United States, which it was earnestly requested should be properly filled and returned to the Department in order that the most perfect statistics ever yet collected might be furnished with the census tables of 1880.

Dr. N. S. Davis, of Chicago, Ill., Chairman of the Special Committee appointed last year to report on the suggestion contained in the address of late President, Dr. T. G. Richardson, of New Orleans, La., looking to the development of originality in the prize essays, made a report favoring the recommendation that there be four annual prizes of \$250 each. As the recommendation affects a by-law, it lies over until next year.

The proposed amendments to the "plan of organization" were taken up. Dr. J. M. Keller's (of Arkansas) recommendation that officers should be selected only from those members who attend the sessions, was tabled by an almost unanimous vote.

Dr. H. O. Hitchcock's (of Michigan) proposition was, that the several State delegations, etc., shall nominate candidates for President, etc., and shall choose one of their number to act on the Nominating Committee, with power to cast as many votes as there are members of the delegation he may represent. Candidates thus selected for the several offices are to be reported to the Association, and the selection shall be from the names thus specified. On motion of Dr. Dudley Reynolds, of Louisville, this proposition was tabled.

The proposition of Dr. J. J. Caldwell (of Baltimore) to form a Section on Neurology and Electrology was tabled.

Dr. T. Clay Maddox, of Baltimore, Md., proposed an additional Section on Diseases of the Genito-Urinary Organs, including Syphilis and Dermatology, which was referred to the Section on Surgery for consideration and report.

Dr. N. S. Davis, as chairman of a committee appointed last year to suggest some law to prevent the teaching of homœopaths by regular physicians, proposed as a change in the "Code of Ethics." Art. I, paragraph I, add "And hence it is considered derogatory to the interests of the public, and the honor of the profession, for any physician or teacher to aid, in any way, the medical teaching or graduation of persons knowing them to be supporters and intended practitioners of some irregular and exclusive system of medicine." This proposition was opposed by a carefully prepared and by far the ablest speech made during the whole session, by Dr. E. S. Dunster, of Ann Arbor, Mich.

He said he had no personal motive in opposing it, nor any desire to shelter himself from the responsibility of any past teaching. He wished to remain in the Association; but not even membership would be a fitting price for the abandonment of scientific convictions. He feared the amendment would bring dishonor and disaster on the profession. The code says medicine is a liberal profession, but this amendment makes it close and exclusive. The whole spirit of the amendment is opposed to the broad principles of true science. He attacked the amendment on various grounds. It was impossible to enforce such a statute. It would be a dead-letter law and a reproach to the wisdom of the body that enacted it. A thorough enforcement of this law would close

every clinic in the land. In nearly every clinic in large cities are found homœopathic students. In the leading homœopathic colleges, text-books, by leading allopaths, are freely used. This is teaching the students of an "irregular" system, as it is called, and you can't help it. Legally, the amendment will be futile. If the student of an irregular system, as it is called, were to apply to a State school and be refused, he could obtain a mandamus in any State of this Union to give him an entrance and provide him tuition. What is the use of setting up limitations which cannot be carried out? He argued also on the merits of the question. It is based on an assumption of a most fallacious character. It assumes that the teaching of the students of regular systems will tend to build up these irregular systems. This is folly. It declares that the teachings of science lead to error—a proposition to which no man in his senses will give his endorsement. Such a principle carried out would prevent a minister of Christ from preaching the gospel when there were atheists or sinners in his congregation. History has to night nothing plainer than that truth is the antidote and finally the victor of error. The argument was not only masterly in its logic, but was marked throughout by a liberality of view which is the honor of a true scientific man. Said he: "If national medicine cannot triumph in such a contest, she deserves to fall and be buried in dishonor." The address caused a sensation in the Association.

Dr. Dudley Reynolds moved to lay the amendment on the table, as he said the amendment had been killed.

Dr. N. S. Davis said he did not wish to discuss the matter, but he would state the reasons which led to the report which proposed the amendment. The Association had taken the steps which made the amendment a necessary result of its action. The Judicial Council, as a Committee, was ordered to report just such a clause. The amendment was the best that could be done. It did not follow that the committee favored the amendment. He said it would be repugnant to him to teach students of an irregular college who merely came in to catch what they could of his teaching. He admitted that there was a line beyond which the Code of Ethics could not be carried without coming in contact with State and municipal laws.

Dr. Pratt said the argument against the amendment was specious. It was the argument of those who wanted to make money by teaching irregular pupils and be considered ethical, while practitioners are considered non-ethical if they associate

with such pupils after they become practitioners. He moved that the proposed amendment lie on the table until next year. Carried.

Third Day.—Messrs. Powers & Weightman, of Philadelphia, and Messrs. Chas. T. White & Co., of New York, who are by far the largest and best manufacturers of cinchona salts in this country, sent a letter stating that if the import duty on quinine was removed, they could no longer continue its manufacture. Their letter was laid on the table.

Dr. N. S. Davis, Chairman of the Committee to report on Ozone, read his report, which concluded with a resolution to the following effect, which was adopted:

That a committee of five be appointed to investigate the practicability of carrying into effect a plan for obtaining accurate meteorological and clinical observations, and report next year.

Dr. J. M. Toner, of Washington, D. C., presented the report on Necrology, which was referred without reading.

The partial report of Dr. H. I. Bowditch, of Boston, Mass., on Sanitaria for Consumptives, was received, requesting continuance of the committee and the addition of Dr. Wm. Pepper, of Philadelphia. Adopted.

The report of Dr. H. C. Wood, of Philadelphia, on the Catalogue of the National Medical Library, stated that Congress had appropriated sufficient to publish two volumes, which are in the hands of the printers.

The Committee on Publications reported that 1300 copies of the *Transactions* for 1878 were issued.

The Treasurer's report shows a balance of \$1,445.66 in his hands.

The Librarian's report makes an exhibit of 2,816 volumes, besides pamphlets.

State Medical Societies and State Medicine.—Dr. Stanford E. Chaillé, of New Orleans, La., read a paper on this subject in the Section of State Medicine on Tuesday, which was ordered to be read in general session. State medicine, he said, was the application by the State of medical knowledge, for the general good, and to execute which, State authority is indispensable. Many physicians are too prone to denounce an existing evil, and to urge its correction, but do not tell how the correction is to be made. The progress of State medicine depends upon the enlightenment of public opinion. In England, State medicine is easily and judiciously regulated by the influence of the British Medical Association on one central legislative power; while in America this power is

frittered away on the local legislatures of 48 States and Territories. He urged that it lay in the power of the American Medical Association to effect the reforms needed. He suggested a standing committee upon the more efficient organization of this Association and *all* its branches. Perhaps an Executive Council should be constituted and charged with the duty of devising ways and means to promote uniformity as well as to strengthen and harmonize all of its practical operations. As at present constituted, this Association has little or no knowledge of its component parts; and a head that has no knowledge of its parts should be gotten rid of. The *Transactions* ought to be published after the manner of the *Transactions* of the British Medical Association. No physician residing in the United States should be elected either as a permanent member or as a member by invitation unless he be a member of the State Medical Society of his State. In like manner, State Societies should be composed of members of County Societies, etc. The paper was returned to the Section for further consideration.

Dr. Moses Gunn, of Chicago, Ill., delivered the address in Surgery, relating mostly to the Pathology of Suppuration. The address was referred to Section on Surgery and Anatomy.

At the request of Dr. S. D. Gross, of Philadelphia, Dr. Eugene Grissom, of Raleigh, N. C., read the following nominations for officers, etc., for the ensuing year: *President*, Dr. Lewis A. Sayre, New York, N. Y.; *Vice Presidents*, Drs. R. Beverly Cole, San Francisco, Cal.; Ezra M. Hunt, Newark, N. J.; H. O. Marcy, Boston, Mass.; and F. Peyre Porcher, Charleston, S. C. *Treasurer*, Dr. Richard J. Dunglison, Philadelphia, Pa.; *Librarian*, Dr. Wm. Lee, Washington, D. C.; *Permanent Secretary*, Dr. Wm. B. Atkinson, Philadelphia, Pa.; *Committee of Arrangements*, Dr. S. O. Vanderpoel, New York, N. Y., Chairman; *Committee on Prize Essays*, Dr. Austin Flint, Sr., New York, N. Y., Chairman; *Committee on Publications*, Dr. Wm. B. Atkinson, Philadelphia, Pa., Chairman.

Place of Meeting, etc., New York, N. Y., First Tuesday in June, 1880.

The following nominations for Chairmen and Secretaries of Sections were also confirmed.

I. *Practice of Medicine, Materia Medica and Physiology*.—Dr. J. S. Lynch, of Maryland, chairman; and Dr. W. C. Glasgow, of Missouri, secretary.

II. *Obstetrics and Diseases of Women and Children*.—Dr.

Albert H. Smith, of Pennsylvania, chairman; Dr. Robert Battey, Georgia, secretary.

III. *Surgery and Anatomy*.—Dr. W. T. Briggs, Tennessee, chairman; Dr. J. Powell Adams, Minnesota, secretary.

IV. *Medical Jurisprudence, Chemistry and Psychology*.—Dr. James F. Hibbard, Indiana, chairman; Dr. Thos. F. Wood, North Carolina, secretary.

V. *State Medicine and Public Hygiene*.—Alabama, Jerome Cochran, M. D.; Arkansas, W. H. Hawkin, M. D.; California, W. F. Cheeny, M. D.; Colorado, C. Dennison, M. D.; Connecticut, C. A. Lindsley, M. D.; Delaware, Wm. Marshall, M. D.; District of Columbia, Thomas Antisell, M. D.; Florida, J. P. Wall, M. D.; Georgia, J. P. Logan, M. D.; Illinois, W. A. Johnson, M. D.; Indiana, J. F. Hibbard, M. D.; Iowa, J. A. Blanchard, M. D.; Kansas, D. W. Stomont, M. D.; Kentucky, S. Brandeis, M. D.; Louisiana, S. E. Chaillé, M. D.; Maine, A. P. Snow, M. D.; Maryland, F. B. Evans, M. D.; Massachusetts, H. I. Bowditch, M. D.; Michigan, H. B. Baker, M. D.; Minnesota, C. N. Hewitt, M. D.; Mississippi, Wirt Johnson, M. D.; Missouri, H. H. Mudd, M. D.; Nebraska, J. Block, M. D.; New Hampshire, G. P. Conn, M. D.; New Jersey, D. A. English, M. D.; New York, A. N. Bell, M. D.; North Carolina, J. C. Walker, M. D.; Ohio, J. C. Reeve, M. D.; Oregon, H. Carpenter, M. D.; Pennsylvania, B. Lee, M. D.; Rhode Island, E. M. Snow, M. D.; South Carolina, R. A. Kinloch, M. D.; Tennessee, T. A. Acherson, M. D.; Texas, H. W. Brown, M. D.; Virginia, F. D. Cunningham, M. D.; Vermont, L. C. Butler, M. D.; West Virginia, E. A. Hildreth, M. D.; Wisconsin, J. T. Reeve, M. D.; United States Army, Joseph R. Smith, M. D.; United States Navy, A. L. Gihon, M. D.

VI. *Ophthalmology, Otology, and Laryngology*.—Dr. Bolling A. Pope, Louisiana, chairman; Dr. Eugene Smith, Michigan, secretary.

For Judicial Council.—Drs. W. O. Baldwin, Alabama; N. S. Davis, Illinois; J. P. Gray, New York; E. L. Howard, Maryland; A. N. Talley, South Carolina; D. W. Stomont, Kansas; and J. P. Logan, Georgia.

For Committee on Necrology.—Dr. J. M. Toner, District of Columbia, chairman; Drs. R. F. Michel, Alabama; F. W. Hatch, California; J. B. Cummings, Arkansas; Chas. Dennison, Colorado; G. W. Russell, Connecticut; J. H. Richards, Delaware; J. P. Wall, Florida; T. S. Hopkins, Georgia; J. H. Hollister, Illinois; G. L. Sutton, Indiana; H. B. Ransom, Iowa; C. V. Notham, Kansas; D. S. Reynolds,

Kentucky; E. A. Lewis, Louisiana; E. F. Sanger, Maine; J. Morris, Maryland; L. F. Warner, Massachusetts; G. E. Ranney, Michigan; D. W. Hand, Minnesota; J. M. Richmond, Missouri; J. R. Black, Nebraska; L. G. Hill, New Haven; H. D. Didama, New York; J. Blain, New Jersey; F. J. Haywood, Jr., North Carolina; Starling Loving, Ohio; Frank Woodbury, Pennsylvania; C. H. Fisher, Rhode Island; Manning Simons, South Carolina; J. B. Lindsley, Tennessee; H. W. Brown, Texas; O. F. Fassett, Vermont; L. S. Joynes, Virginia; R. W. Hazlett, West Virginia; J. T. Reeve, Wisconsin; J. J. Woodward, District of Columbia, United States Army; and A. L. Gilon, United States Navy.

The Committee on Prize Essays awarded the prize of \$100 to Dr. Allan McLane Hamilton, New York, N. Y., for an essay on certain forms of primary and secondary (local) degeneration of the lateral columns of the spinal cord, with special reference to an infantile rare form. An essay on Explorations in Physiology was highly commended, but the second prize was withheld.

The address of the Chairman of the section on Obstetrics and Diseases of Women and Children, by Dr. E. S. Lewis, of New Orleans, La., consisted of a *résumé* of the literature during the past year upon abdominal palpation, puerperal fever, laparo-elytrotomy, change of posterior position, ligation of the cord, traction upon the lower jaw, treatment of post-partum hemorrhage, treatment of cancer of the cervix uteri, and the treatment of uterine fibroids. Referred to the section on Obstetrics, etc.

Dr. Seguin's report upon the metric system was taken up and the following resolutions adopted.:

Resolved, 1. That the American Medical Association adopts the International metric system, and will use it in its transactions.

2. Requests that those who present papers at its future meetings employ this system in their communications, or reprints thereof.

3. Requests the medical boards of the hospitals and dispensaries to adopt the metric system in prescribing and recording cases; and that the faculties of the medical and pharmaceutical schools adopt it in their didactic, clinical, or dispensing departments.

4. Requests the physicians familiar with the metric system to help their confrères and the druggists in its application; and the delegates present at this session to work up the acceptance of the metric system by their respective county and State societies.

5. Requests our president to name a metric executive committee, of which he shall be the *ex-officio* chairman, and whose task will be to give unity and rapidity to this metric movement.

Dr. Chaillé introduced a resolution petitioning Congress to pass a law removing the duty from any one book or instrument which should be imported to assist in the personal pursuit of scientific study. Adopted.

Dr. Brodie, of Detroit, introduced a resolution which he asked to have referred to the Judicial Council: *Resolved*, That the use of articles thus protected by copyright is a distinct violation of the code of ethics. It was so referred.

Dr. Turnipseed, of South Carolina, offered an amendment providing for the formation of a section to examine and report regarding the merits and demerits of surgical and gynecological instruments presented at the meetings of the Association. Laid over under the rule.

Fourth Day. The Surgical section reported that the proposition to establish a section upon genito-urinary diseases has been withdrawn.

The following resolutions affecting the organization of the American Medical Association, of State and of county medical societies, based upon Dr. Chaillé's paper, were offered:

Resolved, That a committee on the more efficient organization of this Association and of its branches, consisting of five members, be appointed by the President.

Resolved, That this committee be instructed to devise and recommend ways and means to secure greater uniformity as well as greater strength of organization of the State medical societies, and all their auxiliary branches.

With these ways and means the following be considered.

1. The compilation of a model code of detailed regulations for the government of State and county medical societies.

2. The requirement from any State medical society of an annual report, to contain certain data (to be specified) necessary to show the condition and progress of each of these State Societies and of their auxiliary branches; to also contain a brief summary of the peculiarities of this organization, and of the measures being used by it to promote medical organizations; and still further, to contain a brief summary of the laws of the State in reference to State medicine, and of the efforts being made to promote the practice of State medicine. Such reports should be published in the *Transactions* of each State medical society.

3. The publication, in annual transactions of this Associa-

tion, of a consolidated report of the above reports from each State, together with special notice of the meritorious work done by any of the branches of this Association.

4. The substitution of a periodical medical journal for the present volume of transactions.

5. The non-recognition by this Association of State medical societies which make no provisions encouraging the organization of auxiliary societies in counties, etc.

6. The advisability of electing no person, either as permanent member or member by invitation, unless such person be a member of a State medical society, provided that there be such a society, and recognized by this Association, in his State.

7. The advisability of refusing to admit to this Association delegates of the societies auxiliary to the State societies, unless the certificates of delegation be endorsed by the authorized officer of the State Society.

8. The advisability of refusing to admit any delegates except those selected from and elected only by voting members who have paid all fees due to their respective county and State societies, and of establishing the principle that only those members of branch societies who are entitled to vote, and have paid all fees due, shall be entitled to delegates.

9. The advisability of urging every medical college to have not less than one lecture delivered to every graduating class on the importance to the profession and to the people of medical organization.

The President appointed as committee to report upon the above resolutions: Drs. Foster Pratt, Michigan; S. D. Gross, of Pennsylvania; N. S. Davis, of Illinois; A. N. Bell, of New York, and Alonzo Garcelon, of Maine.

A communication relating to intervention of physicians in education was received from Dr. R. J. O'Sullivan, of New York, and the request that the committee be continued was granted.

Delegates to Foreign Medical Societies. Dr. E. Seguin, of New York; Dr. L. P. Yandell, of Kentucky; Dr. J. M. Da Costa, of Pennsylvania; Dr. Moses Gunn, of Illinois; and Dr. L. Turnbull and Dr. E. Warren, of Paris, were elected to represent the Association in medical societies in Europe; and Drs. J. C. Hutchinson, of New York, and Wm. Brodie, of Michigan, as delegates to the medical societies in Canada.

The Committee on Nominations reported the following resolutions: *Resolved*, That the Committee on Publication be instructed to advertise for proposals to publish the transac-

tions of this Association in *six* of the largest cities of the Union, and that the contract be awarded to the lowest and most responsible bidder. Adopted.

On motion of Dr. Grissom, an honorarium of \$600 was voted the Permanent Secretary.

Committee on Ozone, appointed by the President: Drs. N. S. Davis, of Ill.; J. M. Toner, of D. C.; S. M. Bemiss, of La.; W. H. Geddings, of S. C.; and H. O. Marcy, of Mass.

Metric Executive Committee—Dr. Theophilus Parvin, of Ind., ex-officio Chairman; Dr. E. Seguin, of N. Y.; Dr. E. Wigglesworth, of Mass.; Dr. J. R. Weist, of Ind.; Dr. E. R. Squibb, of N. Y.; and Dr. Wm. B. Atkinson, of Pa.

The address of the Chairman of the section on ophthalmology, otology, and laryngology, Dr. H. Knapp, of New York, consisted of brief references to a number of subjects, and a notice of some of the more important advancements made in the departments of ophthalmology and otology. *Iridectomy* in chronic glaucoma has given way to *sclerotomy*. *Sympathetic ophthalmia* was transmitted by the ciliary instead of the optic nerve, as advocated by some. Reference was made to *cataract extraction*, to the use of *eserine* and *duboisine*, to ophthalmoscopes, to lid-holders, to tumors of the eye, and to works on pathological anatomy.

Otology showed less extensive, but no less marked advancement than ophthalmology; and reference was made to discoveries in acoustics and the management of mastoid inflammation. A number of instruments and pathological specimens were exhibited.

The address was referred to the Committee on Publication.

The Association of American Medical Editors.

At the suggestion of Dr. Theophilus Parvin, of Indianapolis, a number of medical editors in attendance upon the meeting of the American Medical Association in 1869, formed a permanent organization for the promotion of mutual acquaintance and social intercourse among American medical editors, and for the discussion of topics of common interest; and stated meetings have been held every year since that time.

The eleventh annual session was held in Atlanta, Ga., May 5, 1879—Dr. Wm. Brodie (*New Preparations*), of Michigan, presiding. Representatives from fifteen journals were in attendance. In the President's address, the practice of adver-

tising patent medicines by medical journals, and recommending their use to physicians, was condemned as contrary to the spirit of the Code of Ethics, and resolutions were offered expressing this sentiment. On the motion of Dr. Dunster (*Mich. Med. News*), the resolutions were unanimously adopted, and they were directed to be transmitted to the American Medical Association.

Dr. Parvin (*Amer. Prac.*) referred to the loss that American journalism had sustained in the death of Dr. Isaac Hayes and Dr. Waddell, and moved that a committee be appointed to present appropriate resolutions.

After a general discussion of the objects of the Association and its prospects for future usefulness, the election of officers was held for the ensuing year. The following officers were unanimously elected: President, Dr. T. S. Powell (*Southern Med. Record*), of Atlanta, Ga.; Vice-President, Frank Woodbury (*Boston Med. & Surg. Jour.*); Secretary, Frank H. Davis (*Chicago Med. Jour.*) Time and place of meeting to be governed by the action of the American Medical Association.

A dinner was given to the Association by the staff of the *Southern Medical Record*, on Wednesday, May 7, at which great harmony prevailed.—*Phil. Med. Times*, May 24.

Book Notices, &c.

Publishers and Authors having complimentary copies of their publications for distribution, are invited to contribute such as they can spare to the library of the Richmond Academy of Medicine, where they will be brought to the attention of a large body of influential medical men. Dr. E. T. Robinson, Richmond, Va., Librarian, etc.

Manual of Examination of the Eyes. By DR. E. LANDOLT, Director-Adjoint of the Ophthalmological Laboratory at the Sorbonne Paris. Translated by SWAN M. BURNETT, M. D., Lecturer on Ophthalmology and Otology in the Medical Department of the University of Georgetown, etc. Revised and Enlarged by the Author. Philadelphia: D. G. Brinton, 1879. 8vo. Pp. 312. Cloth. Price \$3.

This is a most excellent assistant in the diagnosis of troubles of the sight. Although claiming to be a "Course of Lectures delivered at the École Practique," still we are informed that the additions and revisions make the work an entirely new one, and fully up to the present state of infor-

mation. Most valuable diagnostic charts are appended, by reference to which the labor of diagnosis is very materially accelerated. The work is not only needed by the specialist, but it would be of great value to the general practitioner—if for no other purpose than to decide whether or not the services of a specialist are required. We very cordially recommend this book.

Clinical Treatise on Diseases of the Liver. By DR. FRIED. THEOD. FRERICHS, Professor of Clinical Medicine in the University of Berlin, etc. In three Volumes—Vol. III. Translated by CHARLES MURCHISON, M. D., F. R. C. P., Physician to the London Fever Hospital, etc. New York: Wm. Wood & Co, 1879. 8vo. Pp. 246. Cloth. Price \$1.25 a volume, or \$12 for subscription for 12 monthly publications. (From Publishers.)

This volume completes the standard series by Dr. Frerichs on diseases of the liver. The work is so generally known and quoted by authors, and its authority so widely recognized, that it is only necessary for us to notice the fact of its republication in this country. This series of monthly volumes (Wood's Library of Standard Medical Authors), as we have already had occasion to remark, is the cheapest medical book publication that we know of.

Demonstrations of Anatomy—Being a Guide to the Knowledge of the Human Body by Dissection. By GEORGE VINER ELLIS, Emeritus Professor of Anatomy in University College, London. From 8th and Revised Edition. Illustrated by 249 engravings on wood. Philadelphia: Henry C. Lea, 1879. 8vo. Pp. 716. (For sale by Messrs. West, Johnston & Co., Richmond.)

An extract from the Preface of this work will better illustrate its purpose than anything we can say within the same space. "In the dissection of a part, the attention is directed, first, to the superficial prominences of bone and muscle, and to the hollows that point out the situation of the subjacent vessels. Next, the cutaneous structures and the different layers of muscles, with their appertaining vessels and nerves are examined in succession, so that the several objects between the surface of the body and the bones may be observed in much the same order as they would be met with in a surgical operation." "Each muscle, blood-vessel, nerve, or other structure is described only to such an extent as it may be laid bare" by the special dissection.

It will thus be seen that, while the work is not intended to

substitute such a work as Gray's most excellent Anatomy, it will nevertheless prove a most valuable companion of it. Indeed, to the practitioner especially who has surgical operations to perform, it will be of even more immediate service than the recognized systematic works. The recognition of its utility is attested by the circumstance that this is a reprint of the Eighth English Edition. The inaccuracies of text of former editions have been excluded from this carefully revised edition. The value of the book will, no doubt, be so generally appreciated as supplying a long felt want of practitioners in this country that a second American edition will be speedily called for. Of course we most unreservedly recommend it to every practitioner of medicine who can possibly get it.

Lectures on Practical Surgery. By H. H. TOLAND, M. D., Professor of the Principles of and the Practice Surgery and Clinical Surgery in the Medical Department of the University of California. With Numerous Illustrations. Philadelphia: Lindsay & Blakiston, 1877. 8vo. Pp. 508. Leather. (From Publishers.)

We wish we could give this beautifully published book an unqualified endorsement; for we know that the author has the capabilities of writing such a work as we had hoped this would be. But there is in the volume before us very little that has not been better said in most standard text-books on surgery. The great misfortune was, that Dr. Toland consented to the publication of a book under his signature when, as he states himself, "my engagements are so numerous that I cannot find time to write a book." A book cannot be "talked." Other authors before him have injured their well-gained reputation by attempting to publish a "talked" book.

Diseases of Live Stock and Their Most Efficient Remedies. By LLOYD V. TELLOR, M. D. Philadelphia: D. G. Brinton, 1879. 8vo. Pp. 469. Cloth. Price, \$2.50. (From Publisher.)

In the Preface, the author states that, practising medicine in a rural locality, he is often consulted about the diseases of domestic animals; hence, he has studied the best books on the subject, "and here presents the combined result of his study and observation." This book is free of technicalities, and is intended for the use of the farmer and stock-owner. Little space is devoted to pathology; but most space is given to the diagnosis of diseases and their treatment. While incidental useful allusions are made to other animals, still the

author devotes himself specially to diseases of horses, cattle, sheep and swine. It must become, when known, the popular treatise of this country, as it gives, in brief and plain language, descriptions of all the usual diseases to which these animals are liable, and the most successful treatments of American and European veterinarians. The work should specially be studied by the country physicians who are so frequently consulted by their patients about diseases of their animals. Indeed, throughout the South, where veterinary specialists are so rare, and in localities where it would scarcely be remunerative for one to settle, this book should be generally found. Its page of contents is quite complete, and its index is very full.

Naval Hygiene—Human Health and the Means of Preventing Disease—With Illustrative Incidents Principally Derived from Naval Experience. By JOSEPH WILSON, M D., Medical Director United States Navy. 2d Edition. Colored Lithographs, etc. Philadelphia: Lindsay & Blakiston. 1879. 8vo. Pp. 276. Cloth. Price, \$3. (From Publishers.)

This book is intended especially for those in charge of vessels at sea or in port—as much for the general reader as the professional man. It abounds, however, in useful and interesting information for all classes interested in maritime sanitary subjects. It is written somewhat after the order of a diary, and for that reason is the more valuable. Excellent chapters are written on the prevention of the diseases more common among the sea-faring population—such as yellow fever, sea-scurvy, typhus fever, etc. Every sea officer would do well to carefully examine this book and remember its teachings.

PAMPHLETS RECEIVED, for which we have no room in this issue for further acknowledgment.

Annual Report of the Board of Health of the State of Louisiana, for the Year 1878. Dr. SAMUEL CHOPPIN, New Orleans, President; Dr. B. F. TAYLOR, New Orleans, Secretary and Treasurer. 8vo. Pp. 192. In addition, Charts the Course of the Total Mortality, the Mortality of Children under One Year and from One to Five Years of Age, and the Principal Fatal Diseases in the City of New Orleans, during 1878, with Meteorological Observations. [As might naturally be anticipated, the subject of Yellow Fever, as it appeared during the Summer and Fall of 1878 in Louisiana and New Orleans particularly receives special attention; and many valuable statistics are here collected.]

- Second Annual Report of Board of Trustees of Western Pennsylvania Institution for the Instruction of the Deaf and Dumb for the Year ending September, 1878.* JAMES H. LOGAN, A. M., Acting Principal, Pittsburgh, Pa. Pp. 55.
- Ninth and Tenth Annual Reports of the Maryland Eye and Ear Institute.* GEORGE REULING, M. D., Baltimore, Md., Surgeon-in-Charge. Pp. 16.
- Elective Action and Small Doses of Medicines, with Illustrative Cases.* By THOMAS J. MAYS, M. D., Upper Lehigh, Pa. (Reprint from *New York Medical Journal*, March, 1879.) Pp. 19.
- History of the Diagnosis, Pathology and Treatment of Yellow Fever.* By J. B. MARVIN, M. D., Late Resident Physician to the Yellow Fever Hospital, etc., Louisville, Ky. (From *Amer. Practitioner*, Nov., 1878) Pp. 15.
- Causes of Sudden Death of Puerperal Women.* An Address in Obstetrics and Diseases of Women and Children, before American Medical Association, June 5, 1878. By EDWARD W. JENKS, M. D., Detroit, Mich., Professor of Medical and Surgical Diseases of Women and Obstetrics, Detroit Medical College, etc. (Extracted from *Transactions of American Medical Association*, 1878.) Pp. 21.
- Injurious Effects of Alum upon the Human System when Used in Bread or Baking Powders, as shown by Eminent Authorities, etc.* (Author and place of publication unknown). Pp. 36.
- Yellow Fever Epidemic of 1878 in New Orleans.* By JOSEPH JONES, M. D., Professor of Chemistry and Clinical Medicine, Medical Department, University of Louisiana, etc., New Orleans. (Reprint from February and March numbers, 1879, *New Orleans Medical and Surgical Journal*.) Pp. 56.
- The Human Eye.* By H. P. SCOTT, M. D., Atlanta Ga. (Reprint from *Atlanta Medical and Surgical Journal*.) Pp. 10.
- The Sanitary Protection Association of Newport, R. I.* General outline of objects of the Association, etc. HORATIO R. STORER, M. D., LL. B., Newport, R. I., Corresponding Secretary, etc. Pp. 7.
- Proposed Legislation on the Adulteration of Food and Medicine.* By EDWARD R. SQUIBB, M. D., of Brooklyn, N. Y. 8vo. Pp. 57. New York: G. P. Putnam's Sons, 1879. (Reprint from *Transactions of the Medical Society of the State of New York* for 1879.) Being No. XIV of Economic Monographs. Also Notes in Reply to Criticisms by the

Press, etc. [Dr. Squibb deserves the unbounded thanks of the profession and the public for this earnest effort to protect them from injurious or adulterated food and medicines. Its perusal should not be limited to sanitarians alone, but the pamphlet should be read by the people as well, in order that they may see their danger, and devise means for self-protection.]

Fifth Annual Report of the Secretary of the State Board of Health of Michigan, for the Fiscal Year ending Sept. 30, 1877. Lansing, 1878. 8vo. Pp. LXXVIII—503. Dr. ROBERT C. KEDZIE, Lansing, President; Dr. HENRY B. BAKER, Lansing, Secretary. [A most excellent volume of useful reports that we regret exceedingly not having space for notice which has been prepared for some time.]

Editorial.

National Board of Health, Washington, D. C.—CONSTITUTING ACT: (*An Act to prevent the introduction of infectious or contagious diseases into the United States, and to establish a National Board of Health.*)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be established a National Board of Health, to consist of seven members, to be appointed by the President, by and with the advice and consent of the Senate, not more than one of whom shall be appointed from any one State, whose compensation, during the time when actually engaged in the performance of their duties under this act, shall be ten dollars per diem each and reasonable expenses, and of one medical officer of the Army, one medical officer of the Navy, one medical officer of the Marine Hospital Service, and one officer from the Department of Justice, to be detailed by the Secretaries of the several Departments and the Attorney-General, respectively; and the officers so detailed shall receive no compensation. Said Board shall meet in Washington within thirty days after the passage of this act, and in Washington, or elsewhere, from time to time, upon notice from the president of the Board, who is to be chosen by the members thereof, or upon its own adjournments, and shall frame all rules and regulations authorized or required by this

act, and shall make, or cause to be made, such special examinations and investigations at any place or places within the United States, or at foreign ports, as they may deem best, to aid in the execution of this act and the promotion of its objects.

Sec. 2. The duties of the National Board of Health shall be to obtain information upon all matters affecting the public health, to advise the several Departments of the Government, the Executives of the several States, and the Commissioners of the District of Columbia, on all questions submitted by them, or whenever, in the opinion of the Board, such advice may tend to the preservation and improvement of the public health.

Sec. 3. That the Board of Health, with the assistance of the Academy of Science, which is hereby requested and directed to co-operate with them for that purpose, shall report to Congress at its next session a full statement of its transactions, together with a plan for national public health organization, which plan shall be prepared after consultation with the principal sanitary organizations and the sanitarians of the several States of the United States, special attention being given to the subject of quarantine, both maritime and inland, and especially as to regulations which should be established between State or local systems of quarantine and a national quarantine system.

Sec. 4. The sum of fifty thousand dollars, or so much thereof as may be necessary, is hereby appropriated to pay the salaries and expenses of said Board, and carry out the purposes of this act.

Approved, March 3d, 1879.

BY-LAWS.—1st. The officers of the National Board of Health shall consist of a President, Vice-President and Secretary.

2d. There shall be an Executive Committee, composed of the President, Vice-President, Secretary and two other members.

3d. The officers of the Board, and the other members of the Executive Committee, shall be elected by ballot at the first annual meeting in each year.

4th. The duties of the President shall be—1st. To preside at all meetings of the Board and of the Executive Committee; (2d) To call meetings as provided in the act creating the Board; (3) To make requisitions upon the Secretary of the Treasury for such sums as may be directed by the Board.

5th. The duties of the Vice-President shall be to take the

place and perform the duties of the President when absent.

6th. The duties of the Secretary shall be to keep the records and conduct the correspondence of the Board and of the Executive Committee, to certify to the correctness of all vouchers for expenditures, and to perform such other duties as the Board or Executive Committee may, from time to time, direct, and he shall be the custodian of all papers, books and other property of the Board.

7th. The duties of the Executive Committee shall be to carry into effect the directions of the Board, and to act for it during the intervals of its sessions, reporting such action to the next meeting.

8th. No purchases shall be made or expenditures incurred except by order of the Board or of the Executive Committee, and the Executive Committee shall not have power to incur any indebtedness beyond the amount of funds authorized by the Board to be drawn by the President, and placed to the credit of the Board with the disbursing clerk of the Treasury Department.

9th. All bills for salaries and expenses shall be duly certified by a member of the Board, and audited and approved by the Secretary of the Board, who shall keep an accurate record of such vouchers and approvals.

RULES.—*Rule 1.* In the election of officers, the nomination shall be by informal ballot.

Rule 2. The standing committees of the Board shall be as follows, each to be composed of three members, to be named by the President, with the exception of that on epidemic and contagious diseases, which shall consist of five members :

1st. On Rules and Interpretations of the Constituting Act and By-Laws.

2d. On Finance and Accounts.

3d. On Epidemic and Contagious Diseases, including quarantine.

4th. On Adulterations and Deteriorations of Food and Drugs.

5th. On Registration and Vital Statistics.

6th. On State, Municipal and Local Sanitary Legislation.

7th. On the Diseases of Domestic Animals.

Rule 3. The regular meetings of the Board shall be semi-annual, in May and October of each year, the precise date and place to be fixed by the Executive Committee.

Rule 4. The President shall call a meeting of the Board whenever five members make in writing, or by telegraph, a joint request to him to that effect.

Rule 5. The Executive Committee shall be considered to be in permanent session, and, in the interval of the regular meetings, any three members, of whom the Secretary shall be one, shall constitute a quorum, and to be authorized to transact any business, provided there be a concurrent vote. In case of disagreement, the Secretary shall be required to report the fact to the absent members and solicit an expression of their wishes as to the call of a formal meeting of the whole committee, or as to taking a vote by correspondence.

COMMITTEES.—On Rules and Interpretation of the Constituting Act: S. F. Phillips, P. H. Bailhache, T. J. Turner.

On Finance and Accounts: J. S. Billings, T. S. Verdi, S. Smith.

On Epidemics and Contagious Diseases: S. M. Bemiss, R. W. Mitchell, J. S. Billings, H. A. Johnson, H. I. Bowditch.

On Adulteration and Deterioration of Food and Drugs: H. A. Johnson, T. S. Verdi, H. I. Bowditch.

On Registration and Vital Statistics: S. Smith, R. W. Mitchell, H. A. Johnson.

On State and Municipal and Local Sanitary Legislation: H. I. Bowditch, S. M. Bemiss, S. Smith.

On Diseases of Domestic Animals: J. L. Cabell, T. S. Verdi, P. H. Bailhache.

EXTRACTS FROM THE MINUTES.—April 2, 1879: Ordered, That the discussions and deliberations of the Board shall be considered confidential so far as regards the public press, or any source through which they may be likely to reach the public press, except when authorized by the Board and communicated through the proper officers.

The committee appointed to report to the National Board of Health in regard to the question as to whether Senate Bill No. 65, as amended and passed by the Senate on the 1st instant, should be recommended for passage by the House, reported as follows:

First. All attempts at disinfecting vessels and cargoes by artificially produced cold, must, in the present state of our knowledge, be regarded as experimental, since there is no satisfactory evidence in existence as to whether the application of a temperature as low as zero in a ship for a comparatively short period of time—that is, for a few hours—will destroy or render perfectly harmless the yellow fever poison.

Second. From what is known of the effects of naturally occurring low temperatures upon this disease, we are of the opinion that the experiments should be tried. So far as re-

gards the proper methods of constructing such a vessel, or the machinery to be placed in it for this purpose, or as regards the proper and reasonable cost of such vessel or the description of machinery, the National Board of Health has no special knowledge.

Third. It would be necessary for the Board to obtain testimony from naval contractors and from engineers upon these points. It is eminently proper for the Board of Health, in its discretion, to advise that a thorough trial be made with artificially produced cold as a disinfectant for vessels infected with yellow fever, and to superintend and direct such trials of any given apparatus, but it would be, in our judgment, preferable that the ultimate selection of the particular form of vessel or machinery to be used for this purpose should be made by the Secretary of the Navy in accordance with the recommendations which he would obtain from the bureaux of his department.

Fourth. If the Senate bill should pass the House in its present shape, it would be expedient for the Board to request of the Secretary of the Navy the decision above referred to.

All of which is respectfully submitted, J. S. Billings, S. M. Bemiss, T. J. Turner.

April 3, 1879: *Ordered*, That Dr. R. W. Mitchell, of Memphis, Tenn., be appointed a special committee to prepare a plan of organization for relief in the case of an epidemic of yellow fever in an inland town or city, to include the organization of medical relief and of nurses—Dr. Mitchell to consult with such persons as he may see proper, and to report the plans to the Board for publication after its completion to the satisfaction of the Board.

April 4, 1879: *Ordered*, That the Executive Committee be, and it is hereby, instructed to employ a commission of experts to make thorough investigations into the causes, conditions and circumstances influencing the existence and spread of yellow fever in such foreign places as shall be indicated in specific instructions hereafter issued.

Ordered, That the selection of the experts and other employees necessary to construct these commissions, shall rest with the Executive Committee.

Ordered, That this commission shall be required to make a full and faithful report of all investigations instituted, and observations made, at as early a date as shall be consistent to a satisfactory completion of duties assigned them.

Ordered, That the Executive Committee provide the funds necessary for compensation of persons employed, and the

payment of all reasonable expenses, and the President is hereby directed to make requisition upon the Secretary of the Treasury for the funds necessary for this purpose; and the Executive Committee shall also procure such letters from the Secretary of State as may be necessary to secure a courteous reception and the co-operation of the authorities at the places ordered to be assisted.

The National Board of Health.—Preston H. Baillache, M. D., U. S. M. H. S., Baltimore, Md.; Samuel M. Bemiss, M. D., etc., New Orleans, La.; John S. Billings, M. D., U. S. A., Georgetown, D. C.; Henry I. Bowditch, M. D., etc., Boston, Mass.; James L. Cabell, M. D., LL.D., University of Virginia, Va.; Hosmer A. Johnson, M. D., etc., Chicago, Ill.; Robert W. Mitchell, M. D., etc., Memphis, Tenn.; Samuel F. Phillips, Esq., Solicitor-General, Washington, D. C.; Stephen Smith, M. D., etc., New York; Thomas J. Turner, M. D., U. S. N., Washington, D. C.; Tullio S. Verdi, M. D., etc., Washington, D. C.

Officers.—Drs. James L. Cabell, President; John S. Billings, Vice-President; Thomas J. Turner, Secretary.

Executive Committee.—Drs. Cabell, Billings, Turner, Smith, Baillache.

Hæmaturic Properties of Dialyzed Iron.—Dr. Robert Amory, of Longwood, Mass., contributed an instructive and useful article on the above subject to the *Boston Medical and Surgical Journal*, April 3d, 1879. Dialyzed iron contains 52 per cent. of metallic iron—over 17 per cent. more than the sesquichloride of iron. After detailing his physiological experiments, showing that dialyzed iron enters directly into the formation of blood corpuscles, etc., he reports, as a clinical observation, five cases of simple anæmia, uncomplicated by organic disease, in which the globular richness of the blood was rapidly improved and the patients restored to health. The absolute increase of blood corpuscles could be counted from day to day by means of the hæmacytometer. The preparation of dialyzed iron essential to success should have a specific gravity of about 1.042, and should have no free acid in it. The best preparation is that made by Messrs. John Wyeth & Brother, of Philadelphia. Dr. Amory's paper is well illustrated by photographs, and he has had them reprinted.

Dr. Wm. C. Dabney, of Charlottesville, Va., we are glad to learn, has returned from his trans-Pacific trip, and his

health has been entirely recovered. Our readers will no doubt hereafter have the benefit of his able contributions as formerly.

The Hygeia Hotel.—We wish to direct the special attention of the profession just at this time to this far famed health resort. It is yet too early to go to the mountains as a matter of pleasure; the sick children cannot remain in the cities; and just now is the time above all others when a trip to the seaside will be most generally beneficial. The healthfulness of the site is well known: its location (Old Point Comfort, Va.) is easily accessible, either by way of Norfolk, Baltimore or Richmond; its ocean scenery is fine, and the obliging proprietor leaves no effort unexercised to give full satisfaction to his guests.

American Medical Association.—We have given, in the appropriate department of this number, a report of the proceedings of the several general sessions of the Association during its recent sitting in Atlanta. But there was so little of novelty in what was practical in the papers and discussions in the several sections; and so little of practical interest which has not time and again been printed within the last few years, that we have reluctantly come to the conclusion that the waste basket is the best place to deposit the notes which we had prepared of the work done in the Sections. In other words, the year has passed by without any recognized original advance being made by the American profession.

It is a common sentiment among those who attend the sessions of the Association with no "axe to grind" that there is too much machinery connected with its "plan of organization." Entirely too much stress is laid upon the legislative power of the body in governing the State and Territorial Societies. Too great an effort is made at "centralization"—not so much of scientific facts as regards the plans of organization and modes of proceedings of the State and local societies. For instance, one of the recommendations involved in one of the addresses which seems to have the approval of the committee to whom Dr. Chaillé's address was referred, if adopted as a part of the organization of the National Association, would completely excommunicate the Medical Society of Virginia. And yet no State Society in the Union has been more loyal to the real interests of the American Medical Association, or had more harmonious sessions since its organization, and none has been more beneficial to the profession

of the State which it represents. This journal has no authority to speak for the Medical Society of Virginia; nor do we speak our belief in any spirit of defiance of superior numbers. But we venture the assertion, as probably representing the views of by far the majority of the Virginia profession, that the present plan of its Society organization is so generally satisfactory that no material change is desirable; and we doubt if such change as is recommended would be accepted by the profession of Virginia. What is here said of the Medical Society of Virginia we believe to be applicable as well to certain other State Societies, which must speak for themselves. It is a matter of mutual advantage to let the State and local Societies alone, so far as relates to their plans of organization.

It is a matter of regret that the University of Michigan controversy was not finally disposed of. In an Association designed and fostered for ostensible medical scientific purposes, it is a great misfortune that so many members will view such matters from a partizan stand point, and apparently strive to make professional party feelings, which disposition, if not allayed, will necessarily disrupt a body of professional men that can otherwise make their Association decidedly useful. Call it "specious" or what else, the masterly argument of Prof. E. S. Dunster in opposition to the proposed burdensome amendment or addition to the already faulty "Code of Ethics" is unanswerable, and will grow in power as those who heard it may from time to time recall it to memory. Even the chairman of the committee—the father of the Association itself—who introduced the proposed addition did not attempt a defense; but he was simply forced to explain why the proposed addition was brought to the attention of the Association. For the sake of the national professional good, let us implore that the American Medical Association will not attempt to make the medical profession of America more of a "trades' union" than it already is. The laws which should govern professional intercourse, where principle is not involved, are no more applicable to different communities than are many of the different customs of people in different sections of the civilized world. But in the instance referred to, all the arguments of *principle* are on the side of the Faculty of the Michigan University.

The election of Dr. Lewis A. Sayre to the Presidency of the Association will do much, we doubt not, to advance the interests of the organization throughout the country. His great genius, as displayed by his brilliant discoveries, and the

great good which he has done to surgical science especially, and the great benefactions he has rendered to suffering humanity, all combine to make him merit the honor which has been bestowed upon him by the representatives of the American medical profession. This election, coupled with the selection of New York city as the place for the meeting in June, 1880, will, we are sure, combine to make the next annual session one of especial interest—not second even to the ever memorable Centennial session in Philadelphia.

The easy, graceful manner in which the retiring President, Dr. Theophilus Parvin, presided, and his impartial decisions when required, were subjects of general praise. He was a faithful officer, and his influence for good was seen in every circle of which he formed a part.

In the way of hospitalities, the citizens of Atlanta more than equalled their far-reaching reputation. Atlanta is a new, growing and prosperous city, but for the present is overstocked with doctors. The editor feels himself under too many obligations to many of the practitioners there for personal favors during his stay not to offer them the protection which the last sentence may possibly give them.

Lactopeptine has been so generally tested, and has become so well established as a digestive of the highest power, that practitioners ought not to be without it. Indeed, it is of more frequent service in digestive troubles than any other one remedy which has been brought to professional attention. But we wish, just at this season, when cholera infantum, etc., with their sequelæ of wasting diseases due to digestive disorders are near at hand, specially to acquaint physicians of the great benefits to be derived from its proper use—particularly during the convalescent stages. Its formula, as published upon every package, commends itself; and the experience of the most eminent practitioners in America and England especially attests its great utility. In several cases in which its use was thought to be indicated, we have been surprised at the marked benefit following its administration. It should be remembered that in most cases requiring pepsin, the addition of a small proportion of acid very materially adds to its virtue. Lactopeptine already contains hydrochloric and lactic acids—the other important physiological digestives—pancreatin, diastase and sugar of milk.

The Indiana Medical Protection Law, enacted in April, 1879, provides that all legally chartered medical colleges in the

State shall have appointed from the State Medical Association of the same school of practice to which such college belongs, a board of examiners, who shall examine all candidates for graduation, and shall recommend or not the bestowal of diplomas. This law does not affect graduates who have been five years in practice before the passage of the act, or those not graduates who have been ten years in practice. Every other candidate for practice in the State shall present his diploma to the clerk of the court before he can obtain license to practice. The penalty for violation of the law is imprisonment in jail for not less than six months, and fined not less than \$25. The act is in force from its passage. This is a good law.

Monstrosity.—Recently a negro woman in the neighborhood of Burkeville, Va. (says the *Southside Sentinel*, of May 9th, 1879) gave birth to a child which has but one body and one head, but two faces exactly opposite each other. It has four arms and four legs fully developed. The faces are not equally developed—one face being of natural size and form, while the other face is much smaller. The head is of natural size, as is also the body; but the body divides about the centre, forming two equally proportioned lower thirds, with appropriate and symmetrical extremities. The spinal column seems to be in the central line of the body until it reaches about the middle of its length, when it apparently divides into two columns to supply the lower extremities. From the external appearance of the body, there are two pairs of lungs, two hearts and two stomachs. No autopsy has yet been made.

The Alabama Medical Laws, recently enacted, require that, in future every applicant for practice shall have a diploma from the State Board of Censors of the Medical Association of Alabama. At the late session of the Board, of the seven applicants for diplomas, six were rejected. Some of these six had been pretending to practise medicine for years. Such action of Boards of Examiners or Censors will do more to raise the standard of medical education than all the threatening resolutions of college and medical societies combined.

Dr. Edward W. Jenks, of Detroit, Mich., has been appointed Professor of the Medical and Surgical Diseases of Women and Clinical Gynaecology in the Chicago Medical College, and will change his residence to Chicago.

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Original Communications.

ART. I.—**American Nervousness: Its Philosophy and Treatment.** By GEORGE M. BEARD, M. D., New York. (An Address delivered before the Baltimore Medical and Surgical Society, February 12, 1879.)

Gentlemen,—If our fathers in medicine of the last century could be brought from their graves to this room this evening, and be told of the subject that has brought us together, the first question that they would ask would be, “What is meant by the term nervousness?” They would say, and very truly, that the Greeks had no word for nervousness as we now understand that term; and that even down to the eighteenth century, nervousness was supposed to mean irritability of temper, disposition to anger, excitability—a mental quality, and not a physical disease. In reply, we should be obliged to say that in the nineteenth century, nervousness meant nervelessness, nervous exhaustion, abnormal susceptibility of the nervous system to internal or external irritants.

American nervousness, during the past half century, has expressed itself by a large variety of symptoms, a number of which are so frequent, so positive in their character, and so important, that they have given names to disease, and are known as such. Among these symptoms and expressions of modern nervousness are neuralgia, sick headache, nervous dyspepsia, hay fever, and, above all, *neurasthenia*, or nervous exhaustion in all its various forms. These conditions, with

others that might be mentioned, constitute a family of nervous diseases that have developed chiefly during the last half century—at least, during the present nineteenth century—and are most abundant, and most severe and most varied in their manifestations in the northern portion of the United States, although they are found in, and are now extending to, England and the Continent of Europe.

The rise of this family of functional nervous diseases brings a new era into medicine and sociology, for it has no precedent in the history of mankind. The ancients had no nervous disease, or almost none, save a few cases of insanity and epilepsy here and there; and our moderns knew little or nothing about them until the present century.

The scientific proofs of this unprecedented nervousness of the Americans during this generation are very numerous. I will mention but a few.

First of all, there is the *increased sensitiveness to cold and heat*, which is observed among all our brain-working classes. Our fathers were content with a temperature of 60° F. We must have, to be comfortable, a temperature of at least 70°; and there are many families who keep their rooms at even a much higher temperature. In other words, we are 10 degrees more sensitive to cold than were our fathers. The heat of our summers is no greater than it was a century ago; but the cases of sunstroke and heat prostration are widely out of proportion to the increase in our population.

Note also our sensitiveness to stimulants and narcotics, as alcohol and tobacco, and even tea and coffee. Not only our fathers, but our mothers, could drink freely of wines and stronger liquors, and even smoke as much as they wished, without developing any of the nervousness of our time. At the present time, a very considerable proportion of the population of this country are unable to smoke, or chew, or drink even mild wine, or tea or coffee—especially the latter—without making themselves perceptibly worse thereby. I find that a very considerable number of my nervous patients have been compelled, before I see them, to give up their coffee and tobacco. All this is modern and pre-eminently American. Likewise the idiosyncrasies of patients in regard

to the action of medicines and the effects of drugs and various external irritants, have, during the last half century, multiplied in variety and phase, and greatly augmented in number. There are thousands who cannot bear opium—who are kept awake instead of being put to sleep by it. The ordinary dose for an adult is sufficient to deprive them of a night's repose. One very eminent physician finds that even chocolate, one of the mildest beverages, is a poison to him; and another experienced physician who consulted me one time in regard to himself, could not, he said, bear anything that I prescribed. I spoke of iron; he said iron, even in small doses, made his head ache; and when I tried it, even with other medicines, it produced that effect. I suggested quinine; he said quinine made him crazy. I tried a zinc combination; it disturbed his stomach. And yet this man, so variously sensitive, was actively engaged in one of our most laborious professions.

One of the very best signs of our civilization is found in the *premature decay of our teeth*. Special explanations, without number, have been offered for this long-observed phenomenon—such as the use of sweets, the use of acids, neglect of cleanliness, and the use of food that requires little mastication. But they who urge these special facts to account for the decay of teeth of our civilization would, by proper inquiry, learn that the savages and negroes, and semi-barbarians everywhere, in many cases use sweets far more than we, and never clean their mouths, and never suffer, except in old age, from cavities in the teeth. The cause of the decay of teeth is subjective far more than objective—in the constitution of the modern civilized man. Similarly, also, with regard to irregularities of the teeth, which, as is now known, are dependent on bad nutrition of the jaws.

Delicacy of digestion is one of the best known and first observed effects of civilization upon the nervous system. The history of the *rise and fall of pork as a food* is itself most instructive on this point. Pork, like the Indian, flees before civilization. In all the great cities of the East, among the brain-working classes of our large cities everywhere, pork in all its varieties and preparations has taken a subordi-

nate place among the meats upon our tables, for the reason that the stomach of the brain-worker cannot digest it. Three times a day, and every day in the year almost, pork in some form was the only dependence of our fathers in the last generation, who could eat it freely without ever asking themselves whether it was easy or hard to be digested. This dethronement of pork has had, and is still having, a disastrous effect upon the American people; for, as yet, no article of food with a sufficient amount of fat has been generally substituted; and fat in our dietaries is one of the most imperative hygienic needs in our time, and which has become to be felt, both instinctively and rationally, and which, on all hands, we are trying to meet by the use of cream, cod-liver oil, eggs, fish, and the fats of fresh meat.

The *eyes*, also, are good barometers of our nervous civilization. The increase of asthenopia and shortsightedness, and, in general, of the functional disorders of the eye, are demonstrated facts and are most instructive. The great skill and great number of our oculists are constant proof and suggestions of the nervousness of our age.

In this sensitiveness of organization, the *reproductive system* ever shares. One of the many evils of our time, we are told, is, that the habit of self-abuse is on the increase, and that men are more indulgent than formerly. Hence the increase of nervous diseases that are connected with the genital functions; and hence the terrific results that sometimes follow early begun and long-continued masturbation. But so far as can be learned from all sources of information on these difficult themes, it would appear that among savages and the semi-civilized, sexual abuse, both in a natural and unnatural way, is carried to a far higher degree, on the average, than among the civilized; we cannot, indeed, bear these abuses as our fathers could. The observation of Bulwer, that it requires a strong constitution to be dissipated, is a just and sound one. The modern young man is not strong enough to abuse himself as perhaps he would be willing to do, or as his ancestor did. Both natural and unnatural methods of sexual indulgence react with fearful and almost immediate power on the nervous system, with symptoms which, through the

labors of charlatans, have become familiar as the songs of infancy. In marital intercourse, we are compelled, as a rule, to exercise a caution and a moderation of which our ancestors knew nothing.

The world inquires why diseases of women increase, and many special causes are assigned; but the one great cause, to which all others are subordinate, is civilization.

The question often agitated is, Whether diseases have changed their type in modern times? This is a question which should not be discussed; to raise it, is to answer it. There is no question but that diseases have changed their type in the last half century. The only question is, What are the degrees of the change, and what are the causes which produce these results?

It is demonstrable that nervous diseases have increased in recent periods; and that, with this increase of nervous symptoms, there has been also an increase in the asthenic forms of disease, and a decrease in the sthenic forms; and, correspondingly, that there has been a change in the methods of treatment of diseases; that neurasthenia—nervous susceptibility—has affected all, or nearly all, diseases, so that nearly all illnesses occurring among the better class of people—the brain-workers—require a different kind of treatment from that which our fathers employed for the same diseases.

The four ways by which we determine these facts are—*first*, by studying the literature of medicine of the past centuries; *secondly*, by conversation with very old and experienced practitioners—men between the ages of seventy and ninety—who link the past with the present generation, and remember their own personal experience and the practice of medicine as it was fifty years ago; *thirdly*, from our own individual experience and observation; *fourthly*, by studying the habits and diseases of savages and barbarians, of all climes and ages, and of the lower orders about us.

Statistics on this subject are of very little value, for reasons that will be clear to those who are used to statistics, and who know how they can be handled. Longevity has increased almost *pari passu* with this increase of nervousness and change in type of disease, and this has been a stone of

stumbling and rock of offence to those who have discussed this subject. Both facts are true; longevity has increased among the brain-working classes, and nervousness has also increased. These two apparently opposite facts are harmonized by a third factor which those who have studied this subject failed to reach—namely, nervousness is not only consistent with longevity, but actually favors it, by preserving the system from attacks of acute inflammatory disease. We do not bear blood-letting now as our fathers did, for the same reasons that we do not bear alcohol, tobacco, coffee, opium, physical pain and sexual indulgence as they could. The change in the treatment of disease is a necessary result of the change in the modern constitution. The old-fashioned constitution yet survives in numbers of people; and in such cases, the old treatment is oftentimes better than the modern treatment.

The diseases of savages can be learned from books of travel and from conversations with travelers. Many of these books, it is true, are of an non-expert character, so far as the diseases of the savage tribes are concerned; but some of them are written by physicians and scientific men of various degrees of eminence, whose observations, on a large scale, compared together, enable us to arrive at the approximate truth. In the study of this subject, I have compared a very large number of books of travel, and I have arrived at this fact, in regard to which there can be no doubt whatever, namely, that nervous disease scarcely exists among savages or barbarians, or semi-barbarians, or partially civilized people. Likewise, in the lower orders in our great cities, and among the peasantry in the rural districts, muscle-workers, as distinguished from brain-workers—those who represent the habits and mode of life and diseases of our ancestors of the last century—nervous diseases, except those of an inflammatory or syphilitic character, are about as rare as they were among all classes during the last century. These people frequently need more violent and severe purging, more blood-letting, more frequent blistering than the higher orders would endure. If we would compare the nervous diseases of our time with those of the past, we have only to look about us

among those classes of people whose temperaments take us back a half or three-quarters of a century; in these classes such diseases as neurasthenia, heavy fever, sick headache are very rare indeed; so that it is very difficult for a hospital for nervous diseases to succeed in getting a sufficient number of patients of this character. On the other hand, hospitals for inflammatory and febrile diseases are enormously patronized among them. It is partly for this reason that the literature for nervous functional diseases is so poor and unsatisfactory. Our medical books and lectures are made up far too often of hospital, charity and dispensary practice.

What, now, are the causes of this increase of nervousness in America during the past half century? There is no single cause; it is a combination of influences that have brought about this unparalleled condition of the nervous system. The primary cause is unquestionably civilization, especially with its recent accompaniments, as the telegraph, railway and the periodical press. These three institutions have drawn, and continue to draw each year, most severely on the nerves of nearly all classes; but particularly upon those who are favored with education. The introduction and popularization of the railway and the telegraph, and the development of the periodical press, belong, it will be observed, to the nineteenth century; and they have intensified in ten thousand ways cerebral activity and worry. This factor of civilization applies to all the great countries—Europe as well as America.

But after we have given this cause every credit to which it is entitled, we are yet face to face with this question, Why are the Americans more nervous than any other people on this planet? The answer to this question, which has occupied the thoughts of philosophical observers for the past quarter of a century, is to be found mainly in these factors: First, the dryness of our atmosphere; and secondly, the extremes of heat and cold. In these two respects, America differs from any other civilized country.

Dryness of atmosphere produces nervousness in two ways: first, by taking up and absorbing the moisture of the body, thus causing us to literally dry up. When the atmosphere is moist, perspiration accumulates upon the surface of the body,

because the air cannot take it up. Hence, in our dull dog-days, we are frequently annoyed by excessive perspiration. In a dry air which is hungry for moisture, the fluids of the body, as they become vaporized, are rapidly conducted away; the body is thus wasted of its fluids. Dry air also prevents the electricity of the body from being conducted away, and thus we become excessively charged with that force, and excessively stimulated by its confinement in the body. Moisture conducts electricity; and the moistened air insensibly carries away the electricity of the body, so that it is impossible for the body to become so excessively charged and stimulated. The evidences of this dryness of our atmosphere are numerous and striking. Clothes on the line dry more rapidly than in Europe. The specimens of the naturalists do not so quickly mold; the hair is stiffer and dryer than that of our European contemporaries, and requires more pomade and oil. This peculiarity of our climate is observed from the Atlantic to California; and the Rocky Mountain region is far more under the influence of this dryness of atmosphere than even the East. In the region of northern Dakota and Montana, as all authorities agree, buffalo and meats of other kind dry more speedily when exposed to the air, and keep much longer than in other countries. The electrical state of what I have spoken, and the charged condition of the body, is also very commonly observed in that section of the country. A comb drawn through the hair produces crackling, and sparks come from the clothing while dressing and undressing in a dark room; and in some cases on the mountain sides, actual lightning is seen coming out of the rocks or soil. In this section of the country, also, where the air is so extremely dry, nervous people frequently become more nervous; they are troubled with insomnia and neuralgia, and various forms of debility. In the valley of Sacramento, as is well known, the north wind coming down from the mountains is exceedingly dry, somewhat like the simooms of the East; so that the whole earth—the metals upon it—become surcharged by the electricity which cannot escape; and the fruit on the side from which the wind is blown, becomes parched and shriveled, and the grass everywhere has its vi-

tality impaired, while men and animals of all kinds become fretful and irritable. This extreme condition illustrates the process which is going on, though in a less degree, all over the northern and eastern portion of the United States. The violent extremes of heat and cold—the bitterness of our winters contrasted with the heat of our summers—excite nervousness by over-stimulation. The application of latent heat and cold, as ice in hot water, is one of the most powerful means of local stimulation that we have in medicine; to this treatment, nearly all of the American people in the northern and eastern sections are constantly subjected.

Secondly, extreme heat and cold produce nervousness by compelling us to live in-doors in unnaturally dry and overheated atmospheres, and making it impossible, either in summer or winter, to partake of those active out-door exercises and amusements in which our English friends indulge at nearly all seasons of the year. The English climate, as contrasted with the American, is more equable. Its moisture, and even its unpleasantness and disadvantageousness is favorable to the nervous system; likewise, the climate of our Southern States is more moist and more uniform than of the North and West: and, according to investigations that are variously made, nervous diseases of all kinds, or nearly all kinds, pretty steadily diminish in frequency as we go South.

The institutions of civilization common to all enlightened countries, such as schools, newspapers, excitement of elections, reforms and revivals, are themselves the results of climate and race, and are also to be included among causes of nervousness. Civilization is burdened with information that it must acquire; every year history raises up new facts, that the school-boy of the future must commit and recite. If we would know why the Americans are so nervous, we should contrast the Greek boy with the New York boy in their manner of training in the schools, in their play, and in the whole order of their lives. The Greek boy's life was a poem, a constant holiday, a perpetual picnic. Of study, toil or work, to which the New York boy is early trained, he knew nothing. Work is really a modern institution. All culture, history, science, literature and languages that have

appeared in the world during the past two thousand years, the lad of to-day must try to acquaint himself with. Of all these, the Athenians knew nothing—could not even predict. When we contrast the life of an American child, from its early school days until the hour it leaves the university or seminary, the many and tiresome hours of study, the endless committing and repeating and forgetting, the confinement in constrained positions, the over-heated and over-dried atmosphere, the newspapers and novels that he is and must be prepared to converse about and criticise: the sermons and lectures which he is compelled to listen to and analyse, the strife and struggle for bread and competence against inordinate competition, the worry and concentration of work made both possible and necessary by the railway, mail service and the telegraph; in view of these facts, we wonder not that the Americans are so nervous, but rather wonder at the power of adaptation of the human frame for unfavorable environment. The education of the Athenian boy consisted in play and games and songs, and repetitions of poems, and physical feats in the open air. His life was a long vacation, in which, as a rule, he rarely toiled as hard as the American lad in the intervals of his studies.

The rapidity of our modern and American life has a tendency to concentrate an enormous amount of activity in a brief space of time. The intensity, the fierceness and violence of our toil, are the results of our climate; and in their turn, they deepen and intensify our nervous sensibility. In the study of this subject, the disposition has been to look exclusively at some one of these secondary elements—our haste in motion or our haste in eating, and to consider some one such factor as the sole cause of American nervousness. Indeed, I may say, that up to the present time, this has been the popular mode of interpreting the unparalleled phenomena connected with American nervousness. Effects have, indeed, been confounded with causes—a process of reasoning which, it may be added, vitiates and destroys nearly all human philosophy, and nearly on all themes, but, especially, on questions of sociology, such as the effects of stimulants and narcotics, or diet, or social customs. American nervous-

ness is a complex resultant of a number of factors—not a single result of one. In order to understand it, to grasp it, to master its philosophy, we must be able to see these factors all at once by themselves, and in their relations to each other.

There is one disease, the type and centre of a large family of functional diseases, to which I have applied the term *neurasthenia*. If we understand the philosophy of this disease and its treatment, there will be little difficulty in understanding the philosophy and treatment of very many of the family of functional nervous diseases to which it belongs. Neurasthenia is pre-eminently an American disease. It might, indeed, be properly called *Neurasthenia Americana*. Although it is found in England and on the Continent, it was here first systematically described, and here it exists in greater variety and frequency than in all other countries combined. The generic term neurasthenia—nervous exhaustion—I subdivide into two: cerebraesthesia—exhaustion of the brain; myelasthenia—exhaustion of the spinal cord.

Among the symptoms that I have referred to *cerebraesthesia* (brain exhaustion) are tenderness of the scalp, cerebral irritation, tenderness and whiteness of the teeth and gums, flushing of the face, special idiosyncrasies in regard to food and external irritants, morbid desire for stimulants and narcotics, insomnia in its varied manifestations, dilated pupils, melancholia or mental depression, deficient memory, or power of intellectual control, different forms of morbid fear, as astrophobia (fear of lightning), agoraphobia (fear of places), anthropophobia (fear of man and society), and its opposite, monophobia (fear of solitude), sick headache, and various forms of headache, and pains in the head, disturbances of the nerves of special sense, as *tinnitus aurium*, and specks before the eyes, subjective tastes and odors, dryness of the skin, eyes, throat and mucous membranes generally. Among the leading symptoms of myelasthenia (exhaustion of the spinal cord), are spinal irritation with general hyperæsthesia, irritation of the tip of the spine, coccygynia, irritable breast, irritable ovaries, irritable womb, vague pains throughout the body, flying neuralgias, tremulous and variable pulse, sometimes very

high and sometimes very low, with occasional attacks of palpitations, sudden giving away of special or general functions, shooting pains in the limbs similar to those of ataxy, sudden starting on dropping to sleep, abnormalities of the secretions and dryness of the skin, or the opposite, excessive perspiration, local and general, as sweating of the hands and feet, gaping, yawning, stretching, neurasthenic forms of chilliness, creeping sensations in the spine, ticklishness, local spasms of muscles—the so-called fibrillary contractions.

This differentiation of the symptoms of cerebrasthenia and myelasthenia is not absolute; a number of these symptoms would seem to be common to both forms, and some, very likely are due to disorders of the sympathetic in the cerebral or spinal region, or both. In some patients, we have almost pure myelasthenia; in others, almost pure cerebrasthenia; in others, a combination, or, as is very frequently the case, an alternation of the two. Some of these symptoms, when they occur, themselves act as causes for other symptoms; for the sensitive nervous human body is like certain mountainous regions—full of echoes and reverberations. An irritation at one point may be transferred to any other point, following along the paths of least resistance, and making itself felt in those parts that are least able to resist molecular disturbances. Thus, for example, seminal emissions and spermatorrhœa, when they arise through abuse or through spinal cord disease, almost uniformly react on the brain—robbing the sufferer of courage and manliness, exciting various phases of morbid fear, of which I have spoken, with aversion of the eyes and countenance. The reaction is also on the vocal apparatus, causing a neurasthenic voice; on the eyes bringing on neurasthenic asthenopia, against which glasses and gymnastics are powerless; on the stomach, inducing irritative dyspepsia; on the sweat-centres, producing morbid sweating of the hands—palmar hyperdrosis; on the face and hands, and ears especially, producing morbid flushing and redness. Likewise, also, nervous dyspepsia, whether excited directly by abuse of the stomach or by over-use of the brain, reacts on the brain itself and on the whole organism; so that, an attack of indigestion is sometimes indicated by pains in

the limbs, or by nervousness of a vague and indistinct character in different parts of the body.

It is of supreme scientific and practical importance to be able to make a differential diagnosis between the symptoms of neurasthenia in its different forms and the symptoms of early stages of grave structural lesions of the brain, spinal cord, peripheral nerves. To make such a differential diagnosis is sometimes the severest test to which the neurologist can be brought, and one of the highest value for the happiness, the plans, and the whole future of his patient. The not being able to meet this test has been, and is now, in all countries as well as our own—particularly in the last twenty-five years—a cause of frequent errors in the advice—both hygienic and medical—given to patients; for both the prognosis and treatment of neurasthenia is oftentimes quite the opposite of the prognosis and treatment of incurable cerebral, spinal or peripheral nerve lesions. If we were compelled to be guided by isolated symptoms, it would be impossible, in many instances, for human skill to make such differential diagnosis between neurasthenia and some of the diseases that it simulates; for the symptoms, considered by themselves, are sometimes precisely the same, and of themselves alone would not point towards the solution of the problem. The tendency of neuropathology is not toward, but away from, the idea of single pathognomonic symptoms. It is by considering groups of symptoms in their relation to each other, and to the history of the case, that we make out, in recent times, the diagnosis of ataxia, or of any of the different forms of spinal disease, or of hay fever. Whenever any of the different phases of professional cramps develop, such as of musicians, or writers, or painters, or telegraphers, or designers, or engravers, or artists, or barbers, or counters of money, there are single symptoms in any one of these diseases, that, in themselves, might mean rheumatism or neuralgia, or neuritis, or diseases of the joints or spine: and very often, indeed, this mistake in diagnosis is made in spite of all the literature and teachings upon this subject.

Neurasthenia is differentiated from organic disease, by taking into consideration these four elements: (1) The

fluctuations and inconstancy of the symptoms; (2) heightened reflex action; (3) the existence of some certain special symptoms, which will rarely be found in organic spinal disease—such, for example, as different forms of morbid fears which I have described, palmar hyperidrosis, excessive tenderness of the spinal cord, deficient thirst, abnormally active pupils, mental depression, extreme insomnia, morbid desire for stimulants and narcotics. In certain organic diseases, it is true, there may be heightened reflex action; but, as a rule, reflex action is diminished in organic or structural disease of the spinal cord. Closely analyzed, a large proportion of the symptoms of neurasthenia, as I have before described them, are of a reflex character coming from the stomach, or some part of the genital apparatus, or, if they are not reflex in their origin, are at least made worse by a reflex irritation. To know this fact, and to act upon it in the treatment of these cases, is indispensable for success. One may treat sweating hands and flushing face and various neuralgias and headache indifferently without any permanent effect, until we attack and destroy the cause, which is often found in some portion of the genital apparatus. (4) Those in whom the nervous diathesis predominates, are likely to have functional nervous disease.

In regard to the prognosis in cases of this kind, this general statement is sustained by experience, viz.: All of these cases can be relieved; many of them can be absolutely or approximately cured; but in all cases time and patience are necessary to bring about these results. I have watched these cases for years after they have left off treatment, and I keep up correspondence with patients who have been under my care, and thus have an opportunity to know what the issue is. Patients of this kind live to a good old age—may attain even unusual longevity, and may have their best health during the latter part of their lives.

Our “sick headaches” almost always leave us between 50 and 60, but, of course, sometimes earlier—about 40 or before; and in this respect, sick headache is, I am persuaded, a type of a large number of functional nervous disturbances.

The results of treatment depend greatly on hygiene and

therapeutics. These cases respond to treatment: they yield directly and positively to the influences of remedies. It has been the usual plan to manage cases of this sort, without making any special diagnosis, by what is called moral treatment, which, when scientifically employed, is mental therapeutics. This is a just and most potent means for controlling the disease, but is not to be used exclusively in these diseases any more than in any other disease; subjective treatment is merely an additional means of relief. In regard to the details of treatment, I will state but a few facts.

First comes *electricity* in its various modes of application—central, general and local. In the dosage, we are, in recent years, learning these four facts: 1. That it is sometimes best to use it in exceedingly small doses, mild currents and short applications. 2. That it is sometimes well to use a very strong and painful current. 3. That applications may be protracted for hours in succession. 4. That applications may be made much more frequently than is the general custom. These four propositions are not brought out in our textbooks. I have not myself insisted upon them, as I mean to do hereafter when I refer to this subject. They have been impressed upon my mind especially of late, and are the direct results of experience with cases. These four propositions apply to nearly all our remedies. In truth, we are widening and deepening the system and range of our therapeutic forces by modifications of the quantity and quality and mode of administration. I have long taught that for spasmodic difficulties, like local sprains of muscles, convulsive tic, facial spasms, etc., very mild galvanic currents are preferable; but I have lately seen a case where very powerful and painful faradic currents, applied with the electric brush, or with the sponge, or both, and with as strong currents as could be borne, were more efficacious than the mild currents. Likewise in sciatica, and even other forms of neuralgia, painful currents that make a blister, or are at least very irritating to the skin, may succeed after mild applications have failed. An electro-puncture directly into the nerve itself will cure when the mild currents are powerless. In the treatment of a new case, and until we have learned the

temperament of the patient, and the way he responds to electricity, it is proper always to employ mild currents, and for the same reason that it is always best to begin with a minimum dose of any remedy. But, when necessary, it is also well to test the full physiological effects of the remedy before giving up a case. I am convinced that in many cases electricity will not give extraordinary effects until we have produced the physiological effects upon the patient, such as soreness of the muscles, nervous irritation, sleeplessness, temporary accerbation of symptoms and the like. To begin treatment with the excitation of these symptoms, is unwise as a rule; very many persons are overgalvanized and over-faradized. Every case in this respect must be itself a study. I formerly believed that an application once a day was, to say the least, enough; but I now know from experience that applications twice a day, and, in some cases, applications quite prolonged are advantageous.

Many years ago, I pointed out the fact that there are certain temperaments that do not bear electricity, or bear it very badly, and must be treated with mild currents, and with quite long intervals between the applications. Any new cases that come under our care may, for all we know, have this temperament. These propositions apply to all the other remedies of which I am to speak.

The ancients, you know, classed the divinities as major, minor—*Dii majores, Dii minores*. Similarly, neurotics may be divided into major and minor remedies. At the head of the major remedies—the *Jupiter omnipotence*—stands, without question, electricity; then come ergot, the bromides, arsenic, strychnine, oils and fats, counter irritation, cannebis indica, massage or systematized manipulations of the muscles, the use of dry heat and cold, hydro-therapeutics, the zinc preparations, belladonna, digitalis and iron.

Of these various remedies, *ergot* is especially worthy of note. Just how ergot acts in nervous diseases is not known, nor indeed are we likely to know in satisfactory detail the action of any remedy. That ergot contracts the blood-vessels, and thus is useful in local congestion of the brain and spinal cord, is one of the clearly established facts in physiolog-

ogy, and is one of the few definite, solid foundations for therapeutics; but that this effect on the blood-vessels is all that there is in ergot in its action on the body, no philosophical student of nervous diseases would claim. Indeed, this contraction of the blood-vessels must be a result as well as a cause. Behind and beyond all this there is an influence which we cannot analyze. One advantage of ergot is the immediateness of its effects, particularly in spinal hyperæmia. The particular doses of ergot need important modifications in special cases. In some instances, very large quantities of ergotine may be given with benefit and without any harm that I can trace. I give ergot for immediate effects, for sick headaches, and for headaches of other kinds, and for long continued action in spermatorrhœa and various other conditions.

Another of these *Dii majores* of neuro-therapeutics is *arsenic* in its different forms. I use, not only Fowler's solution, but DeVerlangans, with also the English preparation of the chloro-phosphide. Arsenic is a remedy, the effects of which are not, as a rule, felt at once. It needs to be kept up—to be persevered with for many weeks, oftentimes for many months. In some cases, no good comes until the physiological effects have been produced. The great power of arsenic for immediate as well as present effects, has been recently impressed upon me by a very remarkable case. A well known physician of New York was under my care for severe neurosis of the stomach, attended with vomiting of all of his food. Though he ate great quantities, he was growing thin and feeble, and he rebelled against nearly every treatment that had been suggested, or, at least, every thing that I gave soon lost its effect. I urged him to use arsenic in small doses: at first he was somewhat averse to trying it, and had made up his mind to go to Europe. For a number of months I did not see him, and supposed he had gone to Europe. A short time since he came to my office and reported that he had tried the arsenic as I had recommended, and that the effect had been immediate, and, with but a slight relapse, up to that time permanent. He had gained in flesh, and re-

gained his power to digest food. The remedy, indeed, acted with specific effect upon him.

Another remedy that perhaps will become, if it is not already, one of the major divinities of neurology, is *cannabis indica*. This remedy has a reputation of untrustworthiness and unreliability, both of preparation and of action. This reputation it is very fortunately losing. I find that for some conditions *cannabis indica* is one of the most trustworthy, most reliable and valuable of remedies. It is one of the drugs, by the proper use of which, the treatment of sick headache, for example, has been, within a few years, revolutionized, both for temporary relief at the beginning of an attack, and during the attack, and as a permanent cure, provided, its action is maintained for weeks and months. It is one of the most certain and convenient and agreeable of all the preparations used in neuro-therapeutics. Its quick and permanent influence over the symptoms of headache suggests its great value in other conditions allied to sick headache, or from which sick headache springs; and I am accustomed now to use it in the different phases or manifestations of neurasthenia and kindred affection. I use it sometimes alone; sometimes in combination with various tonics and sedatives.

Another remedy, not very widely known, but one the value of which is easily proved, is *citrate of caffeine*. Some years since, I called the attention of the profession to the value of this remedy in sick headache as a means of temporary relief at the beginning of an attack; very many physicians have obtained the same results. I now use this remedy for other symptoms beside sick headache, such as backache—what may be called headache in the back—and malaise, general depression. A disadvantage of this remedy is, that it produces wakefulness, and therefore cannot be taken in the latter part of the day.

Allied to caffeine is *coca*, belonging, indeed, to the same family; indeed, it is the active principle of common coffee, tea, guarana and chocolate. The value of coca as a means of preserving the strength, and abstaining from ordinary food, is erroneously exaggerated in the stock anecdotes that are flitting about our medical literature on this subject;

but it has, without doubt, a special and most interesting sustaining and tonic power. It relieves the pain and uneasiness that follow over-exertion, and the peculiar distress that comes from sleepless nights, for which purpose, I may say, caffeine may also be used.

The *zinc* preparations, particularly the bromide, valerianate and oxide are sedatives of very great value in various neurasthenias, and I use them with great freedom. I gave once the zinc combination, including the bromide, the valerianate, the phosphide and the oxide, to a physician who consulted me about a year ago for neurasthenia, resulting from over work in his profession. In a few weeks he reported himself to me to express his gratitude and to testify to the great value of the remedy as a hypnotic as well as a sedative.

Duboisia, the new remedy from Australia, is likely to take a minor if not a major place among the resources of the neurologist. Its effect is somewhat like that of atropine, but yet not entirely like it; and, for the symptom of hyperdrosis, seems to be more effective according to experiments that I have made with it.

Cimicifuga is a remedy, the value of which in choreic conditions is undeniable, and I am persuaded that its use need not be restricted to those conditions.

There are three other remedies which I use considerably, particularly in renal and bladder complications, and genito-urinal disturbances, viz., the *trailing arbutus*, *eucalyptus*, and *hydrastis*. I believe that these remedies, which I often give in combination, have a tonic power, and are of service even when there is no genito-urinal complication. *Damiana* is a remedy which appears to have a general tonic power in a certain special action upon the lower part of the spinal cord, although I have not yet succeeded in obtaining from it the speedy and immediate effect that has been claimed for it. I use it in combination with other remedies.

Thus far I have spoken mostly of new and unfamiliar remedies; the old medicines, however, must not be forgotten. Much that was valuable in our medication, is as good now as it ever was. When our fathers were consulted for cases of this kind, they treated them, if they treated them at all, with

something to act upon the bowels, as cathartics or something of that kind. In this way, they did give some transient relief. I frequently act on this principle, and occasionally administer cathartics to act upon the liver and the bowels. Counter-irritation is certainly a good thing, and cathartics produce counter-irritation of the bowels like a blister on the spine.

Strychnia is one of our older remedies, and I use it sometimes alone, but very frequently in combination with other remedies; yet it cannot be used in all cases, for sometimes it has a depressing effect.

Opium, in small doses, is excellent for many phases of neurasthenia; and were it not for the danger of forming the opium habit, I should use it more frequently than I do.

Alcohol also, in the form of wine, particularly claret and Burgundy, is to be advised in some cases of this kind, but not recklessly, or without reference to the age, character and temperament of the patient. Alcohol is one of the best of our hypnotics in cases where the bromides fail to produce sleep. Where chloral causes severe headache next morning, claret wine, freely used, may produce satisfactory effects without any unpleasant after effects. I do not mention this as a general prescription; I simply say there are cases of which the physician must judge. It has the same objection, however, as opium—that its use may lead to inebriety. In the treatment of nervous cases, it is sometimes necessary to use all of these potent remedies in incredibly and absurdly small doses.

The *mineral acids* are likewise old remedies, but they are good remedies. Dilute nitro-muriatic acid, either alone or combined with the vegetable bitters, I use in different forms of nervous exhaustion, especially where the urine is overloaded, as it often is, with oxalates and urates.

Of *cod-liver oil*, I may say that it probably does more for the nervous than it does for the consumptive. Oil and fats, like cream and butter, are brain food, and if used judiciously, as the stomach can bear them, act both as food and as medicine. The oil I use generally in the form of emulsion, and I use it with great freedom.

Of *phosphates*, this can be said: that they belong to the list of over-praised and over-used remedies. There is a fashion for phosphates just now, and when men become neurasthenic, they think they are on the road to health if they take some of the phosphates or phosphites. Now, these phosphates and phosphoruses and phosphites, are good remedies in nervous troubles; but if they had anything like the specific power claimed for them, there would be little need for treating these cases; most of the patients that I see have taken them in abundance. All these stock remedies have a certain power which, in very many cases, they soon expend—they reach the limit of effect, beyond which they cannot be forced.

Another new remedy, or comparatively new to this country, is *koumiss*—fermented milk. The power of this remedy to produce sleep is very great, and very satisfactory. It is a means of nourishing the body without disturbing or even using the stomach to any very great degree. Koumiss is really digested milk, and is absorbed and taken up into the system without any strain upon the digestive apparatus. My friend, Dr. Brush, who has given attention to the study of this subject, tells me that from experiments which he made sometime since, it was pretty clearly proved that the alcohol which the koumiss contains was used up in the system and not eliminated. I am persuaded that the use of koumiss in the future is to be very widely extended for all conditions where nutrition is difficult—not only in adults, but in children. The one disadvantage of koumiss in some cases—that it constipates the bowels—is to be met by laxatives.

Another very old remedy, but as good as it is old, where it is properly used, is counter-irritation, which I employ both in the form of *actual cautery*, and galvanic cautery, and very small blisters, so small and so arranged as to cause very little annoyance. Counter-irritation in the hands of those who really understand how to use it without abusing it, is one of the three or four major remedies of neuro-therapeutics.

There is among the people, and even in the profession, a prevalent notion that the application of the actual cautery is a very painful procedure. This false idea has been fostered with the public on account of the supposed sufferings of certain

prominent persons, like Charles Sumner, and Clara Morris, the actress, from this treatment. The lectures of Brown-Séquard, referring to this subject, assisted in confirming this impression, and the newspaper accounts, in every possible way, have stimulated and strengthened the belief that it requires the courage of a hero, to submit without etherization, to the operations of the actual cautery. The idea of fire is always troublesome to the human mind; the idea of hell is associated with infinite burning. All these factors together have made it difficult for physicians, in modern times especially, to resort to the use of the cautery as often as it might be well to do. The real scientific truth on this matter is, that the actual cautery, as it can be used, and is used by those who understand it, is not specially painful, even to the most delicate woman. The pain is in the idea of the thing—in the expectation, and not in the burning. Any one who has had a sensitive tooth filled, has suffered ten times more than one who has submitted to a cautery operation, if properly performed. I speak of this point particularly, because the cautery is an agent of such great therapeutical power. This mode of treatment, like the blisters already referred to, must be, and now can be, modified and adapted to the sensitive modern constitution. It is one of the great remedies that stands the test of time and large experience.

Hydro-therapeutics in the form of bags of hot and cold water, the Russian and Turkish baths, and alternate applications of hot and cold is, in skillful and judicious hands, a great remedy for functional nervous diseases. The difficulty is that men prescribe these things for themselves, and use them for themselves and by themselves, and often get evil when they might get good. Every remedy that is good for anything, may, when improperly applied, do harm; but harm in these cases is not due to the remedy, but to the one who uses it.

It is impossible to speak of the treatment of this class of troubles without referring to the *bromides* of potassium, and sodium and lime and lithium. Bromides may now be classed among the old remedies. Their great value in epilepsy has long been known. They are not, however, so well under-

stood in other nervous diseases of a functional character. The bromides may be used in large doses, frequently repeated until the powerful sedative effect is produced, even when there is no sleeplessness; those who use the bromides in this way must know where to stop or to reduce the dose.

There are a few general principles of treatment of which I will speak. First of all, the proper use of *rest* and *work* in the treatment of nervous disease. About a month ago, a patient with ataxy came to me from a distant city in the West: I said to him, "you have left behind you a better doctor than you can find here." He asked, "Who?" I said "*rest*!" I prescribed it for him, and put him to bed. He had been accustomed to take excessive exercise—at least, far more than was good. The next day, another gentleman came, also from a distant city of the West, with the history of a certain form of cerebraesthesia—brain exhaustion—without any myelasthenia, or spinal exhaustion—and of a type that would be benefited rather than injured by a degree of mental and physical activity. He had felt disheartened and thought there was little for him to do in this world. He was of about middle life, and I told him that he probably was no more than "half-way home," and so far as the disease was concerned, he might live and be active for thirty or forty years longer. When he returned, I said to him, "you have come a long distance to consult me, but you left at home a better physician than you can get here." He asked, "Who?" I said "*work*; work I prescribe for you. Take that in connection with all your medicine and you will recover." These two cases make clear the opposite methods of treatment.

A second and general suggestion is, that of a stopping treatment or suspending it at times. Suspending treatment has a positive effect upon the system. Oftentimes it makes a direct impression, which may be better than continuous treatment. A friend of mine, formerly a sea captain, states that when sleeping in his cabin at night, if the sentinel walking the deck above him stopped, it would always wake him. The sudden sensation of nervous activity, like a jar upon the nerves, aroused him from his slumber. I find that patients sometimes do better—make more decided

progress—in these intervals of treatment than while the most active measures are being used. Patients sometimes imagine this a proof of the valuelessness of the medicines; but it is in reality a proof of their power. It has been said that success in life depends largely upon knowing just where to stop. In the practice of medicine, this maxim is certainly sound; and to know where to stop, to let up, to modify the treatment, is one of the best tests of medical skill.

The third general suggestion is, that in the treatment of nervous diseases, we should study with all our energy the psychology of our patients; we must make a diagnosis of the intellectual character as well as of the disease before we can make a prognosis or adopt a plan of treatment. There are those whose minds are so organized, which lack some qualities and have excesses of others—usually a preponderance of the emotional, with a deficiency of the higher intellectual qualities—that they act badly under any treatment, however wise. Some patients take a pleasure in their distresses; it would be cruel to cure them; their pains are their possessions. Any man wishing to make them well would be no better than a thief or a robber. There are those whose chief felicity in life consists in doctoring and being doctored, and to whom the removal of their bodily ills would be like the death of long cherished friends. When such persons come under your care, you cannot expect any treatment to be as successful as with those strong and active intellects, who understate rather than magnify their troubles, and are resolutely determined to get well.

ART. II.—**Notes on the Treatment of Diphtheria.** By J. ALEX. WADDELL, M. D., Staunton, Va.

Of all the acute inflammatory affections, sore throat is the most common, and, I may add, the most curable, as it prevails in this region of country. But notwithstanding the general knowledge of the latter fact, it is often greatly dreaded, even in its simpler forms.

A satisfactory diagnosis of the varieties of this affection, not only sometimes lessens anxiety in the minds of physi-

cians and patients, but is often conducive to a speedier cure.

Sore throat is susceptible of division into several varieties.

1. *Simple inflammatory sore throat*, such as occurs upon "catching cold," accompanied by a cough more or less severe, and generally disappearing as the irritation travels down into the bronchial tubes.

2. *Tonsillitis*, or inflammation and enlargement of the tonsillary glands.

3. *Ulcerative sore throat*, the result of inflammation.

4. *Diphtheria*, the most dangerous of all.

I am satisfied that the last mentioned form is not as common as is generally supposed—many persons confounding a pultaceous secretion from the follicles with lymphatic deposit.

My object, however, is not to write a treatise on diseases of the throat, but merely to call attention to a method of treatment of diphtheria, which I have found eminently successful.

Diphtheria may or may not be accompanied by a marked febrile condition. As far as my observation extends, however, this condition always exists in the first stage of the disease. If the physician is called in promptly, he will find the skin hot, the tongue furred, generally painful deglutition, and headache. When the throat is examined, more or less of a lymphatic deposit is found on the uvula and tonsils. In this stage, small doses of calomel and ipecac every two hours—say from one-quarter to one grain of the first, and one-quarter to one-sixth grain of the latter—will prove very beneficial; but the same prescription will be far more efficient if used in connection with effervescent citrate of potassa. A common prescription with me is citric acid ʒij, and the same quantity of bi-carbonate of potash, dissolved in separate tumblers of water; the former may be sweetened, to render the mixture palatable to the patient. A tablespoonful of each solution mixed together and in *effervescence*, should be taken every hour; and every second hour, if fever is high, from ten to twenty drops of antimonial wine, according to the age of the patient, should be added to the dose.

By the persistent use of this treatment, I have generally found that in twenty-four hours the fever will be considera-

bly reduced, the tongue moistened, and often three-fourths of the deposit removed from the throat. If, however, after the subsidence of the fever and the improvement of the throat, the deposit in part obstinately adheres, my practice is to discontinue the calomel and ipecac, and to use in place of them muriated tincture of iron, in ten or twenty drop doses, *regularly continuing the effervescing preparation throughout the disease.*

If, in forty-eight hours, no improvement of the throat appears, occasional cauterization with nitrate of silver, or a strong solution of sulphate of zinc—say 20 grains to $\bar{5}$ j water—applied by a camel's hair brush, has almost invariably accomplished the desired object.

I have observed several epidemics of diphtheria, and have found the simple method above described most efficacious. For some years past, I have carefully abstained from local applications, except as mentioned. Regarding diphtheria as a blood-disease, my object is to eliminate the poison, and just in proportion as this is effected, will the lymphatic deposit disappear. I am satisfied, moreover, that many lives have been sacrificed, by the induction of croup, from irritating "swabbing" of the throat, especially where there are febrile symptoms.

I will say, also, that from my experience, and upon theoretical grounds, I regard this saline treatment particularly applicable in *scarlatina*. Because of its marked diuretic properties, there is no remedy I prefer as a prophylactic against uræmia, which is so much to be dreaded in that disease.

ART. III.—**Organic Forms in their Relation to Systemic Disease.**

II. Germ Theory. By RICHARD H. LEMMON, M. D., Instructor in Microscopy and Practical Histology, University of Virginia.

[Continued from page 180, June No., 1879.]

II. GERM THEORY.—By reference to the foregoing, it will be seen that the phenomena of putrefaction and the other fermentations are wholly analagous—each consisting of the splitting up of complex molecules into certain more simple products; the action in both instances depending upon the

intervention of various microphytes, whose biological agency is a determining cause of the change.

To the question, how are these organisms brought in contact with the putrescible or fermentable bodies which are so widely distributed, and which so constantly undergo the processes of putrefaction and fermentation? the germ theory answers—that there exist everywhere in the atmosphere the germs of these microphytes, which, when brought into contact with fermentable matter, under certain thermometric and hygrometric conditions, become, after a time, developed into the parent forms, which are known to produce the decompositions just referred to. On the other hand, the opponents of the germ theory, as we have seen, explain the presence of these organisms by stating that they originate by heterogenesis in the changing fluid, and are not derived from pre-existing germs. Let us see what grounds they have for maintaining their argument, by a brief consideration of their hypotheses of heterogenesis. Von Helmont and others, during the seventeenth century, taught that rats, frogs, and other small animals, might be manufactured at will by means of certain formulas. From this, the idea that certain animals were created independently of parents, obtained a certain credence. The life history of certain insects in whom the adult form was very different from the forms of its youthful stages, lent some support to their theory. “Nearly all the causes of error,” writes Dalton (*Treatise on Human Physiology*, 5th Edition, p. 547), “which have suggested, at various times, the doctrine of spontaneous generation, have been derived from these two sources. First, the ready transportation of eggs or germs, and their rapid hatching under favorable circumstances; and, secondly, the different appearances presented by the same animal at different ages, in consequence of which the youthful animal may be mistaken, by an ignorant observer, for a different species. These sources of error are, however, so easily detected as a general rule, by scientific investigation, that it is hardly worth while to point out the particular instances in which they exist.”

As the exact sciences progressed, the disciples of heterogenesis were obliged to limit their doctrine to those forms of

life whose germs are, for the most part, invisible to the highest powers of the microscope. Even here indirect evidence is now so strongly opposed to spontaneous generation, that it is only maintained by an obstinate few, whose minds are of such an order, that they prefer to cling lazily to the result of ancient experiments, rather than renounce their opinions, and study the question in the light of modern science. To these, one might make the same objection as that made by Lucian to Jupiter, and the other heathen Gods, concerning whom he wonders, that they begot so many children in old time, and begot none in his time; and finally he asks whether they have become septuagenary, or whether the *lex Papia*, made against old mens' marrying, restrains them.

Needham (1745) first studied the subject in a scientific manner. His mode of proceeding was the same as that which has since been adopted in like investigations, and consisted in first attempting to isolate infusions, and then destroying the germs, which they might have contained at the time of isolation. The result, he argued, would either be the occurrence or non-occurrence of organisms; if the former, spontaneous generation might be considered proven; if the latter, the Harneian maxim *omne vivum ex ovo* would still stand firm. All this was very well if he had only used sufficient heat to destroy the germs in his putrescible matter; he did not however; organisms appeared, and he enlisted himself among the heterogenists. Some years later, the celebrated Italian Spallanzani, experimentally refuted the conclusions of Needham. He subjected his trial liquid to a boiling heat for several hours, and found that when so treated, microphytes did not appear. To this, Needham objected, that the prolonged heat destroyed the *vegetative force* of the organic matter. We have seen, when treating of putrefaction, how similar objections were made to the experiments of Helmholtz and Schevann, and how they were finally refuted by Schroeder and V. Dusch, afterwards by Liston and Roberts. So we will leave this subject, with the comment that the "vegetative force" which causes the segregation of organic molecules into vital organisms, and which heterogenists declare is destroyed by a temperature of 300°F. is a fallacy, and is dis-

proven by the fact that organic infusions, even though exposed to that temperature, will, on exposure afterwards to the atmosphere, invariably develop germs.

Let us now speak of the heterogenists of to-day, who attempt to refute the germ theory. Chief among them are M. Pouchet, of Rouen, and Charlton Bastian, Professor of Pathological Anatomy, University College, London. From the publications of M. Pouchet (see review by Tyndall) we gather, that he first convinced himself "by meditation" that heterogenesis is one of Nature's modes of creation; and *then* he set to work to prove his hypothesis by finding facts to support it. "His experiments," says Tyndall, "are calculated rather to overthrow the germ theory than to maintain his own." He asks, with much irony, why it is that these germs so much spoken of by the panspermists are not seen in clouds obscuring the sky; and finally he expresses his belief that the germ theory is, on the whole, inconsistent with creative wisdom. In regard to the existence of atmospheric germs, which he speaks of so doubtingly, I may say that the ovarists have no difficulty in offering good proof; the missing link in their chain of evidence is, the non-existence of visual proof, showing that atmospheric germs are developed into fermentative microphytes. Long ago, Tyndall, Helmholtz, and others had demonstrated by means of the electric light the widely diffused presence in the atmosphere of minute bodies, too small to be studied by the highest powers of the microscope; indeed, they have shown that the blue of the sky is caused by their presence. The following experiment, originated by Pasteur, gives the strongest proof of their nature. If a small piece of cotton-wool be stuck in a chink, through which blows a draught of air, and allowed to remain 24 hours, then displaced, dissolved in sulphuric acid, and examined under a high power, a few organic germs will generally appear in the field of the microscope. Now, if a small piece of the cotton which has not been dissolved, be placed in an isolated infusion, in such a manner as to allow of the entrance of nothing more than the strip of cotton, the infusion will become in due time fertilized, and will contain organic life; while similar infusions, in which the fecundating cotton has not been placed, will remain indefinitely sterile.

Prof. H. C. Bastian (*British Med. and Surg. Journal*, Jan. 12, 1878, p. 49), on the strength of an experiment which he proudly speaks of as "my urine and potash experiment," vaguely attacks the germ theory, bringing forward as arguments statements concerning the question of "contagium vivum." In this somewhat noted article, Prof. Bastian makes two cardinal errors. 1st. He confounds the germ theory with that of "contagium vivum." This is wrong; for that theory merely maintains the widely diffused existence in nature of those minute forms, which we have seen are causal of the different fermentations. Of course an acceptance of this theory would justify a rational inquiry as to whether certain phenomena, which appear similar to the fermentative, are caused in an analogous manner. Even if it be true, however, that these latter phenomena have not yet been proven to depend upon organic forms, like the former, this should not be brought forward to refute the truths already so well substantiated. Thus the greater part of the scientific world agree with Pasteur in his interpretation of the fermentative processes of which we have treated; and it is obviously no argument against its decision that measles, for instance, has not been proved to depend upon organic forms. 2dly. As regards the urine and potash experiment, he says that by the addition of liquor potassæ, to sterilized urine, under favorable circumstances, he can produce the fermentation to which urine is liable by exposure to the air; and with the same fermentation, so formed, he can produce secondary fermentations in other tubes containing sterilized urine. This experiment, he considers, finally refutes the germ theory, and establishes, in a great degree, that of Archebiosis. In reply, I would say, that this experiment, and the deduction he makes from it, is only a repetition in a new form of ground gone over by Needham, and should produce the impression that the Professor's manipulations had been carelessly performed. "A single experiment," says Schutzenberger, "which proves by a negative result, that organic infusions protracted from germs from without do not give birth to infusoria, is worth more, scientifically speaking, than ten experiments tending to establish the contrary opinion."

Experiments such as Bastian's will always be open to the objection that sufficient care was not taken to exclude the atmospheric germs. The proof, for instance, would be somewhat inconclusive if I was to declare that from observations I had made on a tooth, I was able to state that Nasmyth's membrane (the calcified membrana præformativa of Huxley) described by so many able microscopists *did not exist*; and yet I have the same right to flaunt any tooth observation in the face of those eminent observers, as had Dr. Bastian to cite so triumphantly his "urine and potash experiment." for it is a fact, that though I have several times endeavored to make preparations, demonstrating the membrane of Nasmyth, I have not yet succeeded, and yet, I by no means consider myself in a position to deny its existence, for my readers would laughingly say, "clearly Dr. L—— is not Nasmyth, Beale or Huxley," and I should be recommended to acquire more skill in the manipulative processes.

To sum up, then, we may assert, that living organisms are not caused by "incident forces acting upon formless colloidal matter," as some endeavor to prove, but that each individual organism is merely a unit link in the chain by which it is connected with the first created ancestral form of his species.

In the refutation of the theory of spontaneous generation lies, I think, the adoption of the germ theory. *For, if organic forms occur under conditions which exclude parent forms, and heterogenesis be untrue, then all that is left us is to believe in the existence of germs, whether visible or not, to account for the life which appears.*

Before leaving the subject, I will offer as further proof of the germ theory, the success which has been so notably achieved by the antiseptic system, which may be defined as the method whereby putrefactive changes on the surface of tissues exposed to the air is prevented, and thus the many dangers which attend such a change are abrogated. Chief among these dangers is the disease known as *traumatic septicæmia*, which is caused by the absorption of a poison manufactured by the microphytes which produce putrefaction. Panum, Weber, Bergmann, and lastly, Burdon-Sanderson, have closely investigated the relation of putrid matter to sep-

ticæmia, and to the elegant experiments of the last mentioned we owe the following: (a) "The injection of septic animal fluids into the veins of animals, produces septicæmia of an intensity proportionate to the amount injected. (b) This result is obtained when the organisms which produce the putrefaction are separated from the injected liquid previous to injection. (c) The virus resides in an isolable substance called pyrogen, which is produced by the putrefactive microphytes; it may be separated from the animal infusion by filtration through porous porcelain. After such filtration, the injection of the filtered liquid no longer produces septicæmia. On injection of the pyrogen, the following symptoms may be observed: After a time a rigor, followed by increase of temperature and simple fever, ending, if a sufficient quantity is given, in the death of the animal; if the quantity be smaller, however, a gradual defervescence takes place, and a return to the healthy standard." This is essentially what takes place in ordinary traumatic septicæmia; the pyrogen in this case is manufactured by the organisms in the wound, which are causing the putrefactive process; it is then absorbed, and the patient suffers from pyrogen poisoning—in other words, septicæmia. The poison is not reproduced or augmented after absorption, but acts as arsenic would; *i. e.*, if the dose be beyond a certain mark, death results; if within it, recovery.

Experience has now taught us that, by making use of certain agents, termed *antiseptics* (which act as poisons on the ferment forms which cause the putrefaction and pyrogen), the former, with septicæmia, a dire consequence of the latter, may be prevented. This pyrogen, which we have just discussed, may, I think, be ranked among the amorphous ferments, such as diastase, ptyaline, etc. Both are formed from organic cells; both have a *limited* fermentative action, for the reason that they are both incapable of reproduction. To Lemaire, a French surgeon, is due the credit of originating the antiseptic system. A few months after the publication of Pasteur's celebrated thesis on *Fermentation* (1860), Lemaire published a pamphlet ("*Du Coal Tar Saponine*") in which he reported many experiments on man and animals, where, by

the application of coal tar, he had prevented the occurrence of putrefaction. He declared the active agent to be carbolic acid, and asserted that it prevented putrefaction by poisoning the septic germs which caused it. Three years later, he published a more complete work on the subject, whose title sufficiently explains the contents: "*De l'Acide Phénique de son Action sur les Végétaux, les Animaux, les Ferments, les Vénus, les Virus, les Miasmes, et de ses Applications à l'Industrie à l'Hygiène, aux Sciences Anatomiques et Thérapeutique*," 1863.

Lister, in 1867, published his method, founded on the same principle, but elaborated both as regards theory and practice. So widely is Listerism known, that it would be out of place here to do more than call attention to the unprecedented success of his system, when carefully carried out. Since its application to surgery, the journals throughout the land have been teeming with its success in diminishing the mortality of all surgical operations, and of virtually banishing from hospital wards, blood-poisoning, erysipelas, hospital gangrene, and kindred diseases, which had so fearfully augmented the mortality of all operations.

Some there are still who object to the antiseptic system, and maintain their position by referring to the ready cure of many wounds and injuries which are exposed to the air, and yet do not undergo putrefactive change; but when this occurs, may there not be a greater colytic power in the tissues, or may not the exposed surfaces heal up before saprophytic germs have time to develop in sufficiently matured forms to produce putrefaction?" It is certainly a commonly observed fact that exposed surfaces which do not heal up very rapidly, almost always undergo putrefactive change. In the opposite case, then, we may conclude that the separative power of the tissues gets ahead of the germs, and the wound becomes closed before they have time to mature. They further object that there is nothing to prevent the entrance into the body of saprophytic germs, and ask why it is that intra-corporeal putrefaction does not commonly occur. Now, both theoretically, and from experiments I have made regarding this matter, I think it most probable that germs do habitually exist in the tissues of the living body. I find that in dead animals,

perfectly protected from the entrance of germs from without, putrefaction invariably occurs, together with the forms which produce it. On the other hand, let the animal be exposed for sometime to a certain temperature, then isolated, and there will be no change. Again, when the blood supply to a part is cut off, putrefaction, after a little while, invariably occurs, even though its surface be well protected by the cuticle.

There seems then to reside in living tissues an anti-fermentative power which, under normal conditions, enables them to resist fermentative decomposition. The above is equally true regarding all fermentations; in the living grapes and other fruits no amount of inoculation will set up fermentative change. Lechartun and Bellamy have proven the existence of alcoholic ferments in the tissues of most fruits; and yet, although lying in contact with the fermentable body, no fermentation commences until the fruit has been plucked from its nourishing stem.

Finally, as regards the antiseptic system, I would say that, it appears to me, in the practice of obstetrics, a new field is open for its adaptation. Arguing from analogy, I think it would be possible by its careful employment to diminish puerperal fever, pyæmia, etc., in the same ratio as has been done in the case of kindred surgical affections. Dr. E. W. Saunders, late of Vienna, tells me that he invariably makes use of it in his obstetric practice, and has as yet been so fortunate as to have lost no case traceable to atmospheric contagia.

[TO BE CONTINUED.]

ART. IV.—“**Thimble-Blistering**” Method of Using Morphia.

By J. C. WATSON, M. D., Saltville, Va.

I beg leave to notice the simple and very useful mode of using morphia which, in my hands for several years past, has given perfect satisfaction, and in very many instances has worked as if “by magic.”

I shall call this little operation *Thimble-Blistering*. I claim for it very great advantages as compared with the other

modes of giving morphia, and especially, in my humble opinion, should it substitute the use of the hypodermic syringe, when we shall have compared the relative value of the two modes. I mention as being of greatest importance, in reference to this mode, absolute safety; secondly, its speedy and efficient action; and thirdly, the absence of the annoying, and sometimes even distressing, symptoms which so frequently follow the use of opium or its preparations.

The profession must admit that some deaths have been caused by the use of the remedy when hypodermically administered, even in the hands of skillful and careful physicians, and reasonably to be accounted for. When we once inject under the skin of our patient one dose or repeated quantities, we must take the consequences—be the quantity administered enough or too much. There seems to be no way that I am aware of to take back the dangerous or even fatal dose which we may have innocently used. Do not understand me as underrating the true value and great usefulness of the needle syringe, as I have owned and used one constantly until a few years since. But, though classed among the bold practitioners, I am free to say that I have never used the syringe without more or less fear and trembling; and on more than one occasion have I agonized and sweated as much as my patient for fear of having overdone the thing at last, and thereby blasted, for some time at least, my professional reputation and aspirations.

Having claimed for the thimble-blistering process absolute safety, I should give the reason, which is, I think, plain. Having obtained relief with the least amount of morphia, we can wipe away the remaining quantity of morphia with the happy assurance that our patient is in no danger, and in the vast majority of cases, too, he will escape that distressing nausea so often following the use of the remedy when given by the mouth or with the syringe.

I will mention, as some of the minor reasons why I prefer the thimble process, the following: You can find a thimble in any house; any one can use the method with success and safety; no one objects to its use—there being comparatively no pain and no danger of abscess; and it may be used on

any part of the body, from the heel (in the white race) to the crown of the head.

It is a pleasure to award to my esteemed friend, Dr. John S. Apperson, Town House, Smythe county, Va., the credit and my heartfelt thanks for having suggested and tried on a patient of ours the mode which impressed me so favorably at the time, and which has caused me to set aside entirely the hypodermic syringe.

An ordinary sewing thimble, a little loosely picked up raw cotton, enough aqua ammoniæ (strong) to saturate cotton without running out, are the preliminary agents required. Gently press the thimble over the selected spot until sensation of heat has been felt for two or three minutes; wipe away any ammonia which may remain on the surface; now, with the finger, rub away the superficial skin; apply dry morphia by at first gently rubbing on, and then carefully adding a drop of water. A small quantity of morphia may be repeated at short intervals until your patient feels its effects, or is satisfied with the relief obtained.

Be sure you hold on until you can get the blistered surface. Don't rub at the skin and then apply the ammonia; otherwise your patient will not be impressed with the beauty or comfort of the operation, and on another occasion might throw a damper over your zeal by calling for the syringe, or wishing some other mode to be used.

For affections of the face and head, I select the mastoid portion of the temporal bone as being the best point for the application of the blister.

In conversation with my friend, Dr. Apperson, I find he does not seem to have used morphia much in this way, nor could he tell me when or where he got the idea. Within the last few years, roughly speaking, I have used this mode probably one hundred times, and in but two cases have I had obstinate nausea, and in these I imprudently used too much morphia.

ART. V.—**The Non-Antiseptic Treatment of Wounds as Illustrated by Three Breast-Amputations.** By J. EDWIN MICHAEL, M. D., Demonstrator of Anatomy University of Maryland, and Surgeon to the Maryland University Hospital, Baltimore, Md. (Read before the Baltimore Medical Association, April 28, 1879.)

A short time ago, I read a paper in one of our local societies in which the progress of antiseptic surgery was reviewed, and the various facts indicative of its success brought under consideration. I did not pretend to take up the scientific questions involved—that is, to discuss the mutual relations of bacteria and septicæmia—but viewed the matter purely in the light of experience, and adduced a mass of evidence in its favor. I mentioned many instances in which its introduction had been followed by most decided improvement in the mortality list. But many eminent men, while they do not pretend to gainsay these facts, are far from admitting the correctness of the theory on which the treatment is founded, and they maintain that equally good results may be obtained by the use of simple cleanliness. Now, while there is such an extreme divergence in the views of different men in regard to the matter of wound-dressing, all evidence is valuable; and it behooves us, as earnest seekers after truth, to adduce whatever facts come under our notice—whether they are favorable or otherwise to the theory we are inclined to support. A partisan discussion of any scientific question is much to be reprehended. It is only the collation of all the evidence attainable, and its careful and logical consideration, that can mutually settle questions of this character. As for myself, I am not a supporter of any theory. I am studying the matter on its merits, and while I am rather disposed to favor the antiseptic methods on the weight of evidence so far developed, I am by no means inclined to close my eyes to whatever merits there may be in other modes of dressing. It will not do for us to decide the question, while men with greatest opportunities for study are yet discussing it.

While Mr. Lister and his numerous adherents are lauding his method to the skies, Mr. Gamgee and others are advocating cleanliness and dry dressings. In the vigorous and learned discussion lately held in the French *Société de Chi-*

rurgie, and occupying many of the sessions of that distinguished body, prominent surgeons expressed themselves with equal decision on opposite sides of the question. In Germany, the pamphlet of Steiner shows that the antiseptic method is best, about as clearly as Kroëlin's statistics prove that no treatment has achieved such good results as the open. In this country, even in this city, opinions are about as various. Lister treats compound fractures with all the precautions known as antiseptic. Gamgee stops up the external wound leading to the fracture with lint soaked in tincture of benzoin. Both claim equally good results. The same may be said of simple incised wounds. Must we necessarily cleave to the one or the other in the treatment of all wounds? May it not be that the one method suits for one class of cases, and the other for a different class? I cannot understand why the same precautions are necessary in the treatment of a simple incised wound, or even an amputation, as are required when we have to do with compound fractures and operations in closed cavities. But I do believe that a great deal depends upon the care with which the details are carried out, whatever method we adopt. Carelessness in the management of the spray during operations and after dressings, use of improperly prepared gauze, and malposition of drainage tubes, have much to do with many so-called failures of Lister's plan. And undue haste in closing the wound before oozing has ceased, insufficient support to the surrounding parts, inaccurate coaptation of edges, and too much liberty of movement, often interfere with the success of the simpler plans.

The cases which I have to present are simple breast-amputations, and they speak for themselves as far as results are concerned. I bring them forward merely as illustrations of wound treatment. The diseases which indicated the operations belonged to the class which we know, clinically, as malignant—not to go more accurately into their pathology. We do not need the microscope to arrive at a decision as to whether or not we will operate, however important that instrument may be to show us the exact composition of the specimen after we have once secured it. The old classifica-

tion of benign and malignant is all the practical surgeon wants. The demands of the pathologist are more exact.

In regard to the propriety of operating for malignant disease of the mamma, I am in full accord with Billroth when he says, "In general, I would lay down the law that every growing tumor of the breast, whatever its composition, should be extirpated."

CASE I.—Mrs. B. R., white, aged 46, has several children, is a wash-woman, and, with the exception of the breast trouble, has a healthy and vigorous constitution. Admitted to Hospital June 15, 1878. In the left breast, was a hard, firm tumor situated about an inch above the nipple, and about the size of an egg. The patient complained of darting pains through the growth, which occurred most frequently while she was at rest. The skin was adherent over the tumor. Three months before admission she had noticed a painful spot, which she attributed to the friction of her pocket-book, which she was in the habit of carrying upon that part of the person. Since she first noticed it, the size of the tumor had increased rapidly, and its painfulness had become correspondingly great. Amputation of the gland was proposed and acceded to, and on the same day the operation was performed in the following manner: The gland was grasped *en masse*, and raised somewhat, when the elliptical skin incision was made by two strokes of the knife. The pectoralis fascia was then exposed, and following its surface, a few sweeps of the knife sufficed to finish the operation. The hæmorrhage, which was moderate in amount, was in great part controlled by pressure—only one ligature being found necessary, though if I had ligated immediately after the extirpation, I could have put on half a dozen with propriety. The wound was well dried with moist sponges followed by dry cloths, and allowed to remain open until the oozing had ceased. The whole line of the incision, except the most dependent angle, was then closed by silver-wire sutures placed about three-quarters of an inch apart. Between the sutures, long half-inch strips of adhesive plaster were placed, with a view to give support to the parts, and prevent dragging on the sutures. A large pad of picked oakum and a neatly-fitting bandage completed the dressing, and the patient was put to bed.

On the next day, she was found to be quite comfortable, with the exception of a slight amount of soreness in the wound, and she was consequently left alone. On the third day, the sutures were removed, but the plasters not inter-

ferred with. There was no appearance of inflammation about the wound, not a drop of pus to be seen, and the parts of the incision between the strips scabbed over. The patient felt well—in fact, was exceedingly surprised to find herself so comfortable. On the seventh day, the patient, having continued to feel comfortable in the meantime, the strips were carefully removed by the aid of a little warm water, and the wound found completely healed. From first to last, not one drop of pus was seen. A week later, I saw the patient with a very pretty cicatrix already beginning to contract, and have heard no more of the tumor, though she lives in Baltimore, and promised to return in case of a relapse.

CASE II.—Mrs. H. T. B., aged 35, of a weak, nervous temperament, though born of healthy parents, entered the Hospital as a private patient June 11, 1878. A swelling had occurred in her right breast two years before, the cause of which could not be attributed to any known injury. When she came under treatment, the tumor was about the size of a small orange, was hard and nodulated, adherent to the skin, and annoyed her exceedingly by the lancinating pains which were frequently felt in it. The operation was performed precisely as in Case I, though the individual being very anæmic, the hæmorrhage was less, and was successfully controlled by pressure and patience. The after-dressing was also similar to that in the former case. After recovering from the anæsthetic, the patient complained of pain, and was exceedingly nervous. One-sixth grain of morphia was given hypodermically without effect, when thirty grains of chloral hydrate were given, and followed by calm sleep.

On the second day, the patient was bright and cheerful, and almost free from pain. On the third day, she was up and walking about her room. The sutures were removed, but the wound was not otherwise molested. On the fourth day (not with the consent of her attending surgeon, however), she combed her hair with the hand of the affected side. The strips of plaster were removed about a week after the operation, and under one of them a few drops of pus were found. With this exception, no pus was seen during the whole progress of the case, and the patient left the house for her home in the South on the twelfth day after the operation.

CASE III.—Harriet B., colored, aged 20, has three children; entered the Hospital about September 1, 1878. She had a hard, nodulated, adherent tumor in the upper part of the right breast, the first beginning of which she had noticed about three years before. It had always been more or less pain-

ful, but of late had begun to rapidly increase in size, and give great annoyance from the shooting, lancinating pains so characteristic of malignant growths. To the outer side of the gland and a little above it there was a hard nodule about the size of a chestnut. The axillary glands were not enlarged. The operation was performed precisely as in the former cases, with the exception that the incisions were continued far enough to allow of the removal of the hard nodule referred to.

On the second day, there was some little serous discharge from the lower angle of the wound, and the patient was pretty comfortable. On the third day, I removed the sutures, and found that not more than half the length of the incision had healed by primary union. It was then that I discovered that the student who had charge of the case had misunderstood the directions for after-dressings, which were the same as in the previous cases. Instead of simply changing the oakum, he had also renewed the strips of plaster, disturbing materially the parts round about, and causing a good deal of irritation. The lips of the middle part of the wound gaped somewhat upon the removal of the sutures, and a purulent discharge was found to be established. The dressing was then changed to suit the condition, and oakum soaked in carbolized oil was applied. From this time there were no unfavorable symptoms; the wound healed kindly, though somewhat slowly, and at the end of about eight weeks, presented a firm cicatrix, which, though somewhat sensitive, remains in good condition to the present time.

In considering the importance of these cases, and their value as illustrations of wound treatment, it may be well to say that they are not selected, but include all the cases of amputation of the breast which came under my care during my last term of service at the University Hospital. They were all treated, both as regards operation and after-dressing, on exactly the same plan; and I am of opinion that the results are sufficiently good to justify me in continuing to operate on the same plan in the future. It is much to be regretted that in the third case the student in charge of the patient misunderstood the directions and removed and reapplied the strips of plaster upon which I depended exclusively for the support of the parts in the immediate neighborhood of the wound, and for that perfectness of rest of the parts which is so essential when we aim at union by the first intention.

A point to which I attach great importance is the removal of the whole gland. Where partial amputations are made, we run a great chance of leaving infiltrated tissue behind, from which we are apt to hear without much delay in the shape of return of the disease; and even when this does not occur, we leave a wound in a kind of tissue which experience has shown does not heal kindly. That amount of gland tissue which we may leave in operations of this kind is not useful, and is certainly not ornamental: and so when we consider the danger of having it, and the advantages of taking it away, I apprehend that it is logically the most rational, and practically the most beneficial, to make a clean sweep of the whole matter.

Clinical Reports.

Report of a Case of Abdominal Pregnancy—Laparotomy—Recovery. By WALTER IZARD, M. D., Liberty, Va.

Mary B., colored, multipara, æt. 36 (estimated), ceased to menstruate in the latter part of July, 1874. She felt fetal "movements" about the middle of December, and was taken with pains similar to those of ordinary labor about April 18, 1875. A physician living near, who had retired from regular practice, was called in, and says that, upon examination, he found the *os uteri* high up, but dilated to about the size of a silver quarter; he could feel no presenting part, and after waiting some time, and expressing the opinion that delivery would not occur for a considerable time, he departed, leaving the case in charge of a midwife.

On the 8th day of August, Dr. T. E. Lowry, of Bedford county, was summoned to see the patient, who stated her belief that she was then over twelve months pregnant. Dr. Lowry found the abdomen about the size of that of a pregnant woman at full term; but, upon making a digital examination *per vaginam*, he found the *os uteri* and cervix about in the condition of the unimpregnated multiparous uterus.

On the 20th August, Dr. Lowry went again to see the patient and invited the present writer (then a medical student) to accompany him. On that occasion, Dr. Lowry made an examination with the speculum and uterine sound in my presence, and found the uterus to measure about $3\frac{1}{2}$ inches in

depth. Afterwards, on making a physical examination of the abdominal tumor, the presence of fluid was detected; and after an apparently sufficiently comprehensive examination, Dr. Lowry expressed the opinion that the enlargement was due to the presence of a cystic or fibro-cystic tumor of the ovary. The patient's general health was good, and milk was present in small quantity in the breasts—a fact then attributed to the firm belief which the patient entertained of her pregnancy, as also the other phenomena which had occurred in the history of the case—fœtal movements, etc.

I entirely lost sight of the patient then until the summer of 1878, when, in passing along one of the roads near Liberty, I saw and recognized her at once. She told me that she was then in, and had enjoyed since I had last seen her, excellent health, but with no diminution of the abdominal enlargement. Her appearance verified her statement in both respects. Having no occasion to examine her, I still conceived her to be the subject of an ovarian tumor of benign character.

January 5th, 1879. On passing by the house, I was called in to see her, and found her confined to bed, when she gave the following history: About a week previously, when pursuing her usual household duties, she had struck her abdomen at its most prominent point against the edge of a door; this accident had resulted in a superficial inflammation and abscess which had “burst,” discharging a small quantity of pus, and subsequently a very abundant discharge of “bloody water.” She complained greatly of weakness, but had no pain. Pulse 110, soft and quick; skin hot and dry; tongue dry and coated with a brown fur; no appetite; bowels constipated. Inspection of the abdomen showed a small opening at the umbilicus—too small to admit the tip of the little finger; a slight oozing of bloody serum was going on. The patient was told that an operation would probably be necessary to save her life, and I promised to return the next day and make a more careful examination than my time admitted on that day. Upon subsequent reflection, it occurred to me as possible that a mistake in diagnosis had been made, and that this might be a case of extra-uterine fœtation—the more especially as I could recall no case of ovarian tumor which presented a similar history and result. I determined on the following day to probe the cavity cautiously, with the hope, if my suspicions were correct, of detecting the bones and debris of the fœtus.

On the following morning, I made a statement of the previous history and present condition of the patient to Dr. S. M.

Bowyer, of Liberty, without mentioning that I had changed my opinion at all from the one originally expressed by Dr. Lowry. Upon hearing my recital of the case, Dr. Bowyer expressed a strong belief in the probability of its being a case of extra-uterine foetation, and probably of the abdominal variety. Expressing much interest in the case, I invited him to see her with me, and give me the benefit of his opinion at an early day. I visited the patient on that day, intending to examine the cavity through the ulcerated opening, but was prevented from doing so by the extreme nervousness and timidity of my patient, who averred that she had rather die than submit to any surgical interference, even so little as the examination I proposed. I deferred the examination until the day when Dr. Bowyer should meet me in consultation, intending then, if necessary, to make the examination under chloroform. Meantime the patient was ordered tonics, whiskey and nutritious diet. Dr. Bowyer was unable to meet me until January 13th, and during this interval, I, being engaged, had not seen her.

Upon our arrival, we found her general condition much worse than when I had last seen her. Pulse 120, weak and quick; skin hot and dry; tongue coated. Patient stated that she had frequently recurring chills, no appetite, thirst and restlessness. Upon removing the covering to examine the abdomen, we were assailed by a most fetid odor which had not been present before. Dr. Bowyer expressed himself as convinced that the case was one of abdominal pregnancy, and that the necessity for an immediate operation was urgent. That being my own opinion also, the nature of the case was fairly laid before the patient—the dangers of the operation in her condition, on the one hand, with the hope of success, and the certainty of death on the other, from the septicæmia which had already commenced. The patient consented to the operation, and the following day at 11 A. M. was set for its performance.

The prognosis was unfavorable from the condition of the patient, her hygienic surroundings, and the difficulty of obtaining accurate and careful nursing in the country.

January 14. Assisted by Drs. S. M. Bowyer and T. E. Lowry, I proceeded to operate by making an incision from the ulceration at the umbilicus to within an inch and a-half of the symphysis pubis, in the linea alba; the incision in the stretched condition of the abdominal walls was about $5\frac{1}{2}$ inches long. The child was found occupying the cavity thus laid open, breech-downwards. Seizing it by the head, I de-

livered it with some difficulty, owing to its size, through the incision. It was found to be a male child in a perfect state of preservation, and of unusually large size. Unfortunately, we had no means of weighing it, but its weight was estimated by the two gentlemen who assisted me—both experienced accoucheurs—at 15 or 16 pounds. The child was covered and surrounded by a substance resembling in color and consistence coffee grounds. This substance emitted the most horribly offensive odor that I have ever encountered; the decomposition of a dead body was nothing to it. This was in considerable quantity, half filling a wooden water bucket when removed. Upon examining the cavity, no viscera were in sight; the parietal layer of the peritoneum was very much thickened, and felt callous to the touch. The cord was found attached to the walls of the sac, near the region of the spleen, where some remains of the partially reabsorbed placenta could be observed. The walls of the sac, which separated the cavity from the intestines, appeared to be formed of fibro-serous membrane, but felt dry and dead, like parchment. The cord was cut off close, and the remains of the placenta left *in situ*.

The cavity was then thoroughly washed out with warm carbolized water, and the wound closed, with the exception of its lower portion, where an opening was left for drainage, with ten silk sutures—five, including the peritoneum, and five superficial. I would have preferred silver-wire sutures, but had not time to provide myself with them, as the operation was performed under the pressure of urgent necessity for promptitude. A rubber drainage tube was then inserted in the wound and the patient put to bed. I saw her an hour later, when she had thoroughly recovered from the chloroform, and said she felt quite comfortable.

Jan. 15. Temperature, 99° F.; pulse, 110. Washed out cavity through drainage tube with carbolized water, returning fluid loaded with membranous flocculi; offensive odor. Emptied bladder with catheter; urine high colored, with heavy deposit of urates on standing. R. Opii pulv., gr. j., twice a day to keep the bowels quiet. Ordered milk *ad libitum*, and whiskey \mathfrak{z} ss every three hours.

Jan. 16. Temperature, 100°; pulse, 110. Tongue coated and dry. Had some pain in the abdomen during the night. Discharge very abundant through and by the side of the drainage tube—offensive and dark colored. Washed out cavity as before. Treatment as before, with addition of quiniæ sulphat., grs. iij, *ter die*. Bladder emptied twice a day with catheter.

Jan. 17. Temperature, 100° ; pulse, 115. Patient is cheerful and hopeful; passed a pretty good night. Cavity washed out; discharge abundant, with same characteristics as before. A very offensive odor pervades the room. Ordered calcium chloride to be sprinkled about, and some tar to be burnt in the room for the purpose of disinfecting the atmosphere.

Jan. 18. Temperature, 101° ; pulse, 110. Appetite improving. Cavity washed out, and treatment continued as before.

Jan. 19. Temperature, 102.5° ; pulse, 115. Discharge very abundant—so much so, that, notwithstanding an arrangement of cloths and cotton to receive it, it is difficult to keep the patient dry. Cavity washed out.

Jan. 20. Temperature, 102.5° ; pulse, 115. Appetite improving. Cavity washed out as before. Odor much less offensive. Large membranous flakes return with the injected fluid. Treatment continued.

Jan. 21. Temperature, 102.5° ; pulse, 110. Condition same as yesterday. Treatment same.

Jan. 22. Temperature, 103.5° ; pulse, 120. Discharge continues the same. Treatment continued the same in all respects.

Jan. 23. Temperature, 103.5° ; pulse, 115. Treatment continued. Appetite good. Patient has, and has had for several nights, an attack of severe pain in the abdomen. Relieved with opium; ten grains quiniæ sulphat. at bedtime failed to prevent its return. Sutures removed, as they were beginning to suppurate. Union of the cut edges has not occurred.

Jan. 24. Temperature, 97° ; pulse, 90, very small, soft and feeble. Patient apparently sinking. Upon examining to discover the cause of this sudden change, I found a firm blood clot in the lower portion of the cavity, and also a little blood upon the dressings. The hæmorrhage seemed to have ceased, and the clot was not disturbed. Fluid extract of ergot, $\mathfrak{z}\text{j}$, was administered and repeated in an hour, and whiskey, $\mathfrak{z}\text{ss}$, every half hour until the patient rallied, which she did in about two hours—the temperature going up to 99° F., and the pulse to 100.

After this the temperature remained about the normal standard, and the patient's progress toward recovery sustained no serious interruption. The bowels were not allowed to move for fourteen days after the operation when they were moved by a cathartic. Obstinate constipation was long a serious drawback to the comfort of the patient—the bowels,

for a month, not moving without the aid of cathartics or enemata. The cavity was washed out daily with carbolized water until the carbolic acid had to be abandoned on account of the occurrence of a slight carbolic acid poisoning; the urine, upon being tested, showed its presence in considerable quantity. The bladder had to be emptied by means of the catheter for six weeks after the operation before it regained its tone.

As I said, there was no union of the divided edges of the wound. The large cavity filled up with granulations from the sides and bottom—the edges of the wound being kept as closely in apposition as possible by means of adhesive straps and bandage. At the present writing, not quite three months after the operation, the wound has entirely healed, and the patient's health is so good that she is fatter than she has been for many years.

The menstrual flow, which, I neglected to mention, was regular during the four years of gestation, but had ceased a month before the operation, returned about six weeks after the operation, and has since been regular.

The points which I conceive to be worthy of remark in this case are: The length of gestation, which, counting from the beginning of conception (which may be pretty accurately determined), extended over a period of four years and five months; the excellent health of the woman during all this time; and the large size and perfect preservation of the child. Of course, the shut sac in which the foetus was enclosed would account for its not being subjected to any of the influences favorable to the development of decomposition, the accession of air, etc.; but it is known that nature, if it cannot throw off a body *in toto*, which is foreign to the locality in which it is placed, endeavors to remove it by absorption and elimination through the natural channels for the removal of excrementitious substances from the body. Now, no effort of this kind was apparent in this instance. The child was not even shrivelled; its limbs were round and the flesh felt firm and elastic. Can we affirm that the internal surface of the sac was not an absorbing surface? It must be so, and yet so far as its structure could be determined without microscopical examination, it was similar in construction to membranes of the body which are known to be absorbing surfaces.

There is another question of interest in connection with the size of the child, which was much larger than the ordinary infant at full term. Is it possible that the growth and development of this fetus may have continued for an appreciable length of time over the time usually occupied in utero-gestation? I think so upon the following grounds: The locality in which this fetus was situated so far resembled the uterus as to furnish a cavity for its development with adequate attachment and supply for the placenta and all things necessary for the growth and maturation of the fetus. But there the resemblance ceased; it had not the physiological power of the uterus after a certain time to cast off the fetus, to cast loose from its attachments the placenta, and thus break up the connection between mother and child. It seems probable, then, that the process by which this connection was destroyed was slow, continuing, perhaps, through a considerable time, and that the development of the fetus was prolonged, gradually diminishing in its supply instead of being suddenly deprived of it.

In concluding this paper, it gives me pleasure to testify my appreciation of the important advice and assistance rendered me in the after-treatment of this case by Drs. Bowyer and Lowry, and especially of the great kindness and courtesy of Dr. Bowyer in placing at my service facilities for performing the operation, which were then, being a young member of the profession, not otherwise at my command.

Acute Myelitis; Parenchymatous Degeneration of Heart-Muscle, Cirrhotic Liver, Chronic Diffuse Nephritis with Intense Congestion of Kidneys; Urethritis; Chronic Cystitis; Pyelitis; Hypostatic Congestion and Pulmonary Œdema.
By VERNON G. CULPEPPER, M. D., Member New York Pathological Society; Late House Physician Charity Hospital, Blackwell's Island, New York, etc., Portsmouth, Va.

H. M., æt. 31 years, Ireland; occupation, reporter. This patient was admitted to my ward in Charity Hospital, New York, August 13th, 1878. He possessed a typical figure of health, and gave the following history: He was always well up to ten years ago, when he became infected with syphilis,

for which he was treated specifically. This treatment, however, did not altogether prevent the invasion of secondary symptoms—there being a papular eruption disseminated over his body and extremities. Six months subsequently, he contracted gonorrhœa, which subsided in about three weeks under treatment. Since he arrived at the age of maturity, he has pursued an abandoned and dissipated course of life. Recently he has been on a protracted debauch. Whilst in a state of intoxication, he alighted from a street-car and fell on his right knee, thereby causing him considerable pain. At present, he has an intense urethritis, accompanied by a mucopurulent discharge from the urethra, which he first noticed one week ago. He also complains of a constant pain located just above the patella of the right knee.

I saw him *August 21st* in consultation with my visiting surgeon, who diagnosed rupture of the ligamentum patellæ, and ordered his leg and thigh to be put up in plaster-of-Paris dressing.

On *August 26th*, he complained of loss of motion of the left lower extremity. Upon being requested to flex his leg upon his thigh, he made repeated attempts, but unsuccessfully, and when the limb was forcibly flexed, he could not extend it. I tested his sensation, and found that his perception of impressions was markedly defective. Reflex movements were absent when the soles of his feet were irritated. My attention was called by the orderly to the condition of the patient's bed linen, which was saturated with urine. I made a cursory examination, and noticed urine trickling from his urethra, and there was a fluctuating tumor in the hypogastrium. He assured me he had been micturating involuntarily for the past two days; he also stated, in response to inquiry, that his bowels had not moved for five days. Immediately suspecting paresis of the bladder and rectum, I introduced a retention catheter, and drew off two quarts of ammoniacal urine. The paralysis extended to the crest of the ilium. (I should state that hyperæsthesia did not precede anæsthesia.)

August 28th. My attention was directed to a number of living insects over the pubes. I had him cleansed, and in the evening had his urine drawn by the orderly, who observed the same variety of animalculæ floating in the urinal. The following morning, I catheterized him; preceding the flow of urine, there was a considerable discharge of pus. He complained of intense thirst, and felt very feverish; anorexia was also present. A careful and thorough examination

was immediately instituted. A thermometer, placed in the axilla, indicated a temperature of $104\frac{3}{4}^{\circ}$ F.; pulse, 120; respirations, 30 per minute. Face flushed; conjunctivæ injected; expression dull and listless; skin hot and dry. A physical examination of the chest revealed no cardiac nor pulmonary disorder. There was no tenderness over the spine, and no evidence of cerebral trouble, as the patient was perfectly rational. Examination of the abdomen elicited the presence of tympanites, with considerable pain on pressure over both iliac fossæ. The area of hepatic dullness was decreased. A careful chemical and microscopical examination of the urine showed traces of albumen, numerous varieties of bacteria (common and spiral), with a super-abundance of pus corpuscles.

Between the 29th of *August* and the 5th of *September*, his temperature varied but slightly—it continuing above $103\frac{1}{2}^{\circ}$, with a pulse averaging 120, although large and frequent doses of quinine were administered.

September 6th. Temperature, $99\frac{1}{2}^{\circ}$; pulse, 84; respirations, 18 per minute. General condition improved.

September 9th. Temperature, $105\frac{1}{4}^{\circ}$; pulse, 138; respirations, 36 per minute. I called a consultation, which resulted in a diagnosis of relapsing fever—which conclusion was arrived at by the relapse occurring on the tenth day—his body being slightly jaundiced, and spiral bacteriæ being detected in the urine. The latter is regarded by Liebermeister as characteristic of that malady. The next day, I observed an erythematous discoloration of his buttocks. Airing was recommended, and the part frescoed with alcohol.

September 11th. Temperature, $98\frac{1}{2}^{\circ}$; pulse, 114; respirations, 16 per minute. The tissues, which were discolored yesterday, have become gangrenous and sloughed over sacrum and coccyx. Charcoal poultices, well carbolized, were ordered. The phagedenic action continued, involving the deeper structures, exposing the posterior surface of sacrum and coccyx. I examined the part, and observed a considerable amount of water passing through the slough. There was no communication between it and the rectum. I passed a sound into the bladder, and inverting it, was satisfied that a fistula existed between the bladder and this hiatus.

September 12th. Temperature, $102\frac{1}{4}^{\circ}$; respirations, 102 and firm. Complains of intense pains in hypogastric and iliac regions, which were very tender on manipulation. Hiccough, low muttering delirium and vomiting—the matter ejected resembling coffee grounds—set in 24 hours preceding death.

Autopsy, 17 hours after death. Body large and fairly nourished. Rigor mortis present. Surface has yellowish hue with purplish discoloration over dependent portions. Large bed sore over sacral region, measuring five inches transversely and four inches perpendicularly. Surface is black and gangrenous looking, and the coccyx and portion of sacrum are laid bare.

Head.—Bones, dura mater and sinuses normal. Vessels at the base of the brain normal. Pia mater everywhere is deeply injected, and shows points of thickening and opacity; also blood-staining—the latter being post mortem. Brain substance rather anæmic. No lesions of ganglia at base were noticed.

Spinal Cord.—Dura apparently normal; adhesions between dura and pia in lower cervical region for a short space. The pia on posterior surface is deeply injected and thickened. Substance of the cord shows softening of both gray and white matter, which is traced from above, in lower cervical region, downward through the dorsal and lumbar regions. In lower cervical and upper dorsal regions, for a space of about two inches, there is considerable flattening of the cord antero-posteriorly, and this portion is reduced to a white pulp, semi-fluid. As we pass downward, the softening is not so extreme, but is marked, and the gray matter of the cord cannot be discerned. Both the anterior and posterior portions of cord appear to be about equally involved. In the lumbar region, the softened cord substance has more of grayish white color, or small gray points mixed in with the white.

Thorax.—Pleural cavities normal. *Lungs*.—Both show extreme hypostatic congestion and œdema, and in lower lobes hypostatic pneumonia. At several places, there were evidences of fibrous changes, and near the root of one of the lungs, was what appeared to be an encapsulated, cheesy mass about the size of a hazel nut, grayish white in color, and surrounded by fibrous banks. Mucous membrane of bronchi presented marked evidences of chronic bronchitis.

Heart.—Pericardium normal. Right side contained yellowish clots. Valves and vessels normal. Left ventricle shows hypertrophous dilatation. Heart walls are rather flabby and present the appearance of parenchymatous degeneration.

Abdominal Cavity.—Intestines distended with gas, and the omentum pushed up. *Liver*.—Weight, 4 pounds, 6 ounces; rather pale yellow color. On section moderately firm, the parenchyma in some portions showing cirrhotic change; in others, it had a waxy appearance, but there was no amy-

loid reaction. *Spleen*.—Slightly increased in size; capsule wrinkled; parenchyma pale, pinkish hue and pretty firm. *Kidneys*.—Firm to the feeling and cut; capsules bear away portions of kidney substance at several places over both kidneys; otherwise they are easily stripped. Surfaces have deep red color and show stellate congestion. Over the surface of left kidney are seen several puckered spots of varying size, and which look like cicatrices. On section through these, they appear to be the remains of a pyelo-nephritis, pigmented lines extending down through the cortical substance and pyramids. On section, a portion of both kidneys present appearances of chronic diffuse nephritis. The *pelves* are dilated; lining membrane pigmented; and vessels deeply injected; also shows hæmorrhages. The *ureters* are slightly dilated, and their lining membrane in same condition as that of the pelves.

Bladder and Penis taken out together. A small opening through the anterior wall of bladder was found just behind symphysis pubis; small sinuous tracts were noticed leading down through the tissues along the lateral pelvic walls to the large ulcerated opening, forming the bed sore above described. The mucous membrane of bladder was thickened, pigmented, deeply congested, and showed signs of hæmorrhages; bladder contracted. Urethral mucous membrane is deeply congested, but there are no strictures. The *Prostate* normal.

Stomach dilated; mucous membrane thickened, follicles prominent, vessels dilated, deeply congested, and over quite a large space at the fundus are seen hæmorrhages.

Intestines contain a large number of hard, dark-colored scybalous masses; the mucous membrane shows some spots of staining by these. Nothing else of any importance noticed.

Atropia Poisoning—Morphia its Remedy. By C. G. POLK, M D., Philadelphia, Pa.

On the afternoon of the 17th of May of this year, I was called to a man about fifty years of age, who drank the contents of two bottles containing solutions of sulphate of atropia. As nearly as I could learn from the prescriptions in a drug store and the amount taken of the solutions, his stomach had received at least three grains of the poison.

When I first saw him his pupils were widely dilated, his breathing was stertorous, and his sensibility almost lost; the

coma was profound. The time for any advantage from a stomach pump had passed by. I injected into his arm four grains of the acetate of morphia, prescribed a solution of tannin, and promised to see him in a couple of hours.

I saw him again at 6 o'clock with my friend, Dr. W. H. Forbes. We gave him a solution of morphia, directing a half-grain of the sulphate, or its equivalent of the solution, to be given every half hour.

I saw him again at 10 o'clock with Dr. Forbes. His breathing was much improved; his pulse full, though slow and soft—not exceeding fifty pulsations per minute. He had taken but two grains of morphia since 6 o'clock. Dr. Forbes injected two grains of the sulphate of morphia in his arm, and we left him for the night. Next morning we found him walking in his yard, pupils normal, but his gait was unsteady; otherwise he seemed to suffer no inconvenience.

From this case, it would seem that ten grains of morphia will antidote three grains of atropia.

Correspondence.

Physicians Wanted in Australia.

[The subjoined letter was addressed to Dr. F. Peyre Porcher, of Charleston, S. C., who has kindly sent it to the *Medical Monthly* for publication. No doubt it will be of interest to some who are in search of locations. The writer of the letter, Dr. Piggott, was formerly of Virginia, and during the Confederate war served in the Confederate service as an assistant surgeon under Dr. Porcher while in charge of the Confederate Hospitals in Norfolk, Va.]

Dear Doctor,—knowing there are many worthy and competent young doctors in the Southern States at present, I wish you to do them the favor to have published in some medical journal that there are many good vacancies here. An industrious, sober and competent man can easily find a location which will enable him to lay up two thousand a year. On my way to this place, I was offered a situation which was worth from a thousand to fifteen hundred pounds sterling. The physician must be competent and sober. Taxes are light and wages high. Living is rather expensive, but fees

are good. I charge a guinea for the first visit, and then a half guinea for each subsequent visit; and a pound for extracting a tooth for a person in easy circumstances if I go to his house; ten shillings a mile. In the interim, one is occasionally called forty or fifty miles.

Since I saw you last, I went to Mexico, where I remained eleven years; then to London for one month; then to Paris; then off to the Turkish war. Nine and a half months in the Turkish service; one month in all at Stamboul; then I went to Alexandria, Cairo, through the canal, down the Red Sea (which is not red), across the Indian Ocean to Bombay, up to Alahabad, and down to Calcutta. In India, there are good locations that will pay from two to three thousand a year. On to Penang, Singapore, Batavia, Manila, Hong Kong, and landed in Australia, where I expect to spend the remainder of my days, which I hope will be many yet. I am gray, but stouter than ever before in my life.

The negroes here are inferior to those of Africa. While in the forest, they do not build houses, cultivate no crop, and manufacture nothing for sale. They have remarkably slender limbs, straight hair, black, fierce eyes, and are very filthy in their habits. Very few of them make good servants. There is a peculiar tree here called the "bottle tree," which will contain about a large barrel of water. It is hollow from ten to twenty feet up to where the limbs put out. The water is wholesome and percolates within. The country is generally level, and not so fertile as Mexico. This small town is situated in the greatest plain I ever saw, and I have been told there are others more extensive.

Yours truly, WM. McCLUNG PIGGOTT.

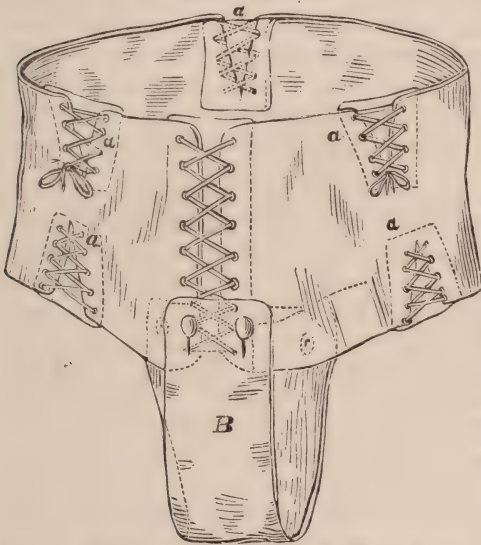
Tambo, Queenland, Australia, Jan. 28, 1879.

P. S.—I can get the doctors out cheaply as immigrants.

Improved Uterine Abdominal Supporter.

Editor Medical Monthly,—I herewith present you an engraving of my Improved Uterine Abdominal Supporter, a bandage of great service in cases of displacement of the uterus, such as prolapsus, procidentia, anteversion, retroversion,

etc. It is, perhaps, most useful in cases of anteversion, in which I have found it invaluable. I would also recommend it in cases of vertigo accompanying pregnancy. In one case which came under my care, it relieved the dizziness almost instantly. It also answers remarkably well as a *post-partum* band, and if properly applied and worn for a sufficient length of time, would relieve much suffering and a majority of the womb troubles that are now so common. I place it before your professional readers in the hope that it may meet the wants of some of them, and prove as useful in their practice as it has in mine.



The annexed engraving is a front view of the supporter. It is composed of two thicknesses of strong cotton pierced with eyelets to lace up in front similar to a corset, while at *a a a a a* are gores laced up to suit the shape of the body and give the necessary support. Under these laces are pieces of cloth, which serve to protect the skin from the

laces. The perineal band *B* is buttoned at the front and back, as shown, and is therefore easily detached for purposes of cleanliness. The front end of the band may be buttoned with elastic loops, which would increase the ease and comfort of the wearer.

West Chazy, N. Y.

WM. M. PERRIGO., M. D.

Cure for Obstinate Vomiting.—*The Practitioner* says that the spirit of walnut (*spiritus nucis juglandis*), given in drachm doses three times daily, has checked vomiting after the failure of other remedies.—*Philadelphia Med. Times*.

Original Translations.

From the German and French. By WM. C. DABNEY, M. D.,
Charlottesville, Va.

The Use of Muriate of Pilocarpin in Diseases of Children.—This paper, by Dr. J. Weiss, is based on observations made in Prof. Bókai's clinic in Budapest, and was published in the *Pest. Med. Chir. Presse*, No. 2, 1879.

The number of children in whom the medicine was used was fourteen; of these, a large proportion was suffering with scarlatinal dropsy due to nephritis. In four cases, there was, in addition, extensive bronchitis; in two, diphtheria; and in one, a pneumonia of the left side. The results obtained were in general quite favorable, and all of the patients recovered.

The advantage which the writer claims for pilocarpin is, that it removes the accumulation of water in the tissues by producing a free perspiration, and the diseased kidneys are thus allowed to rest.

Two solutions were used for hypodermic injection. One, containing only 1 per cent. of pilocarpin was employed with children under four years old; while for older children, a 2 per cent. solution was used. In delicate children who were prostrated by the violence or long duration of their illness, it was found useful to inject four or five drops of ether along with the pilocarpin to prevent the collapse which might otherwise occur. In this way, the vomiting, prostration, and other alarming symptoms occasionally observed could be entirely prevented. The injection was made in the arm usually once a day; at first, half a syringe full was used, but afterwards, the entire contents of the syringe was inserted at once.

The action of the drug manifested itself in a few moments. In the majority of cases, there was a slight redness of the face, which increased rapidly, and only disappeared after the secretion of sweat had ceased. As a general thing, the forehead and face were bathed in a profuse perspiration in from three to five minutes. Only once was there no flow of perspiration at the end of forty minutes, when a second injection was given, followed almost immediately by copious sweating.

The duration of the sweating was very various; in one case it lasted an hour and a half; in another, three hours and a half; and in a third, when there was general dropsy of a high grade, and when very little urine had been secreted, it lasted fifteen hours.

The amount of perspiration and saliva secreted stands in direct proportion to the amount of pilocarpin administered.

Of the fourteen patients, two of them complained of pain in the abdomen after the injection, and four of headache. Contraction of the pupil was observed eight times. It came on with the perspiration, and lasted from one-half to three-quarters of an hour.

Measurements of temperature, which were made both before and after the injection, showed, as a general thing, a considerable fall, which only lasted, however, for from half an hour to three hours.

The pulse increased in frequency from 12 to 30 beats, and was full and bounding. This increased frequency lasted from a quarter to a half hour. In two patients very much debilitated, alarming collapse occurred after the injection of half a syringefull of the pilocarpin solution, and stimulants had to be administered. The administration of ether with the subsequent doses prevented all such trouble afterwards. Vomiting occurred in four cases. There was violent coughing in almost every case after the injection, and in four cases of extensive bronchitis, and one of pulmonary œdema, the lungs were almost entirely cleaned out by the persistent cough.

In several of the cases, the bowels were freely moved, and the stools were generally very loose and quite offensive. The urine was commonly discharged in small amount, and in no case was any increase in the amount of albumen observed.

The following conclusions were reached by Dr. Weiss:

1. Pilocarpin is a very useful remedy in children who have suffered from scarlet fever.

2. It should be given at first in small doses and increased if necessary.

3. In weakly children, who are apt to have collapse, a few drops of ether should be combined with the pilocarpin solution.

4. Pilocarpin acts promptly and energetically, and is more certain than any of the other diaphoretics.

5. In dropsy, accompanied by extensive bronchitis and considerable difficulty of breathing, this distressing symptom is usually greatly relieved by the action of the pilocarpin.

The Value of Benzoate of Soda in Diphtheria.—Dr. Ludwig Letzerich (*Berliner Klin. Wochenschrift*, No. 7, 1879) has used benzoate of soda in 27 cases—in 3 adults and 24 children. In eight cases, the local affection was extensive and the general symptoms very severe. Death occurred in only one case;

in this patient, there had been croup, and the child was much debilitated from want of sufficient nourishment; the air passages had also been attacked. Of the severe cases three were boys and five girls, and their ages ranged from five to eight and a half years. All had high fever, were delirious, passed their urine and feces in bed, and the local affection was extensive. In the blood were found great numbers of bacteria and plasma "nuclei," which rapidly developed into micrococci. In some cases the development took place in the "growing pan" earlier than in the throat, "thus showing that the general infection may precede for some time the localization of the disease." Benzoate of soda, when taken into the body in sufficient quantity, hinders the development of the diphtheritic germs.

To children under one year old, the medicine should be given as follows: Benzoate of soda, 5 parts; distilled water and peppermint water, each, 40 parts; syrup of orange peel, 10 parts. Of this mixture, the child should take half a tablespoonful every hour. The dose should, of course, be increased according to the age of the patient.

No unpleasant symptoms were observed at any time even in children at the breast. The diseased surface itself should also be sprinkled with the benzoate of soda, or else it should be blown in through a quill. This was done in some cases every three hours; in milder ones two or three times a day. Older children should gargle with a 5 per cent. solution. The first favorable symptom is the diminution of the fever. Then the false membrane gradually disappears.

The Value of Salicylate of Soda in the Acute Articular Rheumatism of Children.—M. Archambault read a paper on this subject before the Société de Thérapeutique on the 12th of February last, a review of which appeared in *Le Progrès Médical* for March 22d.

M. Archambault, who is the physician to the Children's Hospital, commences by saying that, although salicylate of soda has been very extensively employed in the acute rheumatism of adults, considerable hesitation has been manifested with respect to its use with children. He considers the subject under three headings, as follows:

1. The salicylate of soda is perfectly tolerated by children even in a daily dose of six grammes. All the little patients to whom the medicine was administered bore it well and did not suffer from vomiting or any other disagreeable symptom. Only in one case was vomiting observed, and the little patient in this instance was suffering with nephritis. M.

Archambault thinks the tolerance of the remedy is due to its rapid elimination. At the end of fifteen or twenty minutes it can be detected in the urine in considerable quantity.

2. Its use causes the rheumatic symptoms to disappear rapidly and entirely. Suppose, for example, that it be administered at the commencement of an acute attack in the quantity of six grammes in the doses at six hours intervals. Generally after the third dose, the articulations are much less painful, and the child is able to make some movements. The pain soon afterwards disappears entirely; the temperature and pulse undergo a decided fall, and the congestion of the joints is much diminished. These effects are almost invariable. M. Archambault is not willing to assert that the salicylate of soda is a specific in rheumatism, as quinine is in intermittent fever; but it is almost a specific. Furthermore, it is, he thinks, perfectly harmless, and it is very far preferable to any of the remedies heretofore employed. In subacute or in non-articular rheumatism it acts much less rapidly, but is exceedingly beneficial. As a general rule, M. Archambault gives the medicine three days in succession, and then suspends its use. The system remains charged with it for about sixty hours. Should a relapse occur, the medicine is resumed, but it is very rare to have more than two such relapses.

The dose depends upon the age of the child. At the age of two and a half years, four grammes may be administered in the twenty-four hours. At five years, six grammes in the dose of two grammes every six hours.

3. The salicylate of soda prevents the cardiac complications of acute articular rheumatism in children. The importance of this fact cannot be overestimated. It has been said with reason that rheumatism in children was much more dangerous than in adults, because of the greater frequency of cardiac complications. A large proportion of the affections of the heart in adults may be traced to rheumatism occurring during childhood. Among the children treated by M. Archambault with salicylate of soda, there was not a single case in which the heart was affected, and this he thinks was due to the heroic method in which the medicine was given—the disease being cut short within twenty-four hours, before the heart troubles could be developed.

As a result of his observations, M. Archambault concludes that salicylate of soda is almost a specific for articular rheumatism in childhood, whether acute or subacute, and that it acts very beneficially also in other rheumatic manifestations,

such as torticollis, and the simple painful affections of the joints. Torticollis is usually relieved in one or at most two days.

The Treatment of Ozæna.—In *La Tribune Médicale* for May 4th, 1879, is a paper on this subject taken from the *Annales des Maladies de l'Oreille et du Larynx*, and written by Dr. Massei, of Naples. Dr. Massei entertains the opinion that ozæna is caused by parasites, and his treatment is directed accordingly. The editors of *La Tribune Médicale*, while they do not agree with him as to the cause of the affection, think the paper one of decided value. Dr. Massei seems to have obtained excellent results. The treatment is divided into three stages as follows: (1) Dilatation of the contracted nasal passages. (2) Cleansing and disinfection. (3) The local application of remedies.

When there is considerable narrowing of the nasal passages caused by swelling of the mucous membrane, and of hard crusts, which interfere with respiration, Massei practises gradual dilatation by the aid of graduated bougies, just as in catheterism of the urethra.

After having obtained sufficient dilatation, he uses frequent injections of a very weak solution of salicylate of soda, the strength being one part of soda to five hundred of water. This acts both as an astringent and a disinfectant. The injections are made by means of Fauvel's retro-pharyngeal syringe.

The parts being thoroughly cleansed, Massei applies calomel to the surface by means of a nasal speculum.

This treatment should be continued as long as the case requires it, in spite of apparent failure at first, or subsequent relapses.

Surgical means are only resorted to when the bones of the nose are diseased.

Proceedings of Societies.

Baltimore Academy of Medicine.

Uterine Hæmorrhage During Pregnancy, Necessitating Premature Labor.—Dr. H. P. C. Wilson reported a very interesting case of uterine hæmorrhage during pregnancy, which commenced at the third month, and became so excessive towards the seventh month of gestation as to threaten the life of the woman and necessitate a premature delivery. The

early appearance of the bleeding excluded placenta prævia, and an examination of the os exhibited a granular eroded condition that induced some of the physicians who had seen her to suspect a cancerous development. All kinds of treatment were tried in vain—the hæmorrhage increasing in intensity. As it was believed impossible that the woman could go to term, and that she must sink under the constant and profuse drain which was continually going on, premature labor was brought on by means of Barnes' dilators. After delivery, convalescence was speedy, and complete recovery took place—an evidence that there was no cancerous degeneration of the uterine mucous membrane.

Should another similar case occur in the practice of Dr. Wilson, he would use astringent applications to the cavity of the neck, and run the risk of inducing labor pains thereby, in the hope of arresting the bleeding and permitting the woman to go to term.

Daily Discharge of Amniotic Fluid during Pregnancy.—Dr. C. Winslow reported a curious case of a pregnant woman losing a quantity of amniotic fluid every night, and none in the day. She went on to full term. His explanation was that an orifice must have existed in the amniotic sac near the os. The erect position during the day would, through gravity pressure, thoroughly close it and prevent leaking. The recumbent posture would take off the pressure and allow the fluid contents of the uterine cavity to leak out between the membranes and the uterine walls; hence the nightly discharges.

Circumcision not Effectual in the Reflex Nervous Symptoms due to Adherent Prepuce and Phimosis.—Dr. F. T. Miles reported several cases of irregular reflex nervous phenomena which medicine did not relieve, and in which cases an adherent prepuce with phimosis was discovered. Circumcision was practiced in these cases with immediate relief to the patient. Unfortunately, the cure was not permanent, and in the course of a comparatively short period, the annoying symptoms had all returned. Dr. Miles believed that in some way the shock of the operation gives temporary benefit, but in his experience, no permanent cure had been effected from the operation of circumcision and breaking up of preputial adhesions in the case of reflex paralysis that had come under his observation.

The Sphygmograph for Diagnosis—Peculiarly Slow Pulse.—Dr. C. Johnston exhibited some beautiful sphygmographic tracings, showing the value of this new instrument in diagno-

sis; one case was of special interest. A lady patient had a pulse of 33 to the minute, which had attracted his attention from its peculiar slowness. From time to time he had tested the pulse with utmost care, but could never get more than the 33 beats. The sphygmographic tracing exhibited a very slight elevation in the middle of each trace division in evidence that a feeble heart-pulse did occur with every alternate strong beat, too feeble for the finger to detect, and yet clearly defined by the sphygmographic tracings. Under a tonic treatment, the lady improved much, and, in the course of a month, the pulse of 33 to the minute had developed into 66 equal pulsations. The sphygmograph now gave the sixty-six equally strong wave impulses to the minute. The pulse had always been 66—the alternate beats, however, having been too feeble to be recognized, thus giving the explanation of the very slow pulse.

Dr. J. J. Chisolm reported a case illustrating a **New Operation for Saving a Lost and Painful Eye**.—A boy of 14 years of age had his left eye cut open by a stone. Through the wound in the sclerotic the vitreous ran out, and the eye-shell collapsed. The physician in whose care the boy was, applied cold dressing with atropia, and was much pleased to find, in the course of a week, that the wound had healed. The eye regained its fullness, although there was no appreciation of light in it. After the eye was seemingly well, severe pains in the eye set in, and when they became unbearable, the boy was brought to Dr. Chisolm for treatment. He found a good looking eye, clear cornea, an iris so retracted that the pupil seemed as large as the cornea. There was no fundus illumination, showing a vitreous chamberful of blood. The wound in the sclerotic had healed perfectly. There seemed but one course to pursue—removal of the eye-ball to stop the suffering and remove the dangers which threatened the other eye from sympathy. Dr. Chisolm put into practice a recent and novel expedient suggested in cases of glaucoma to retain an eye that still looked well, in which there was no sight, but from which there was much suffering. He made an incision at the nasal corner through the conjunctiva, dissecting the tendon of the internal rectus from its sclerotic adhesion. Through this opening, he introduced a pair of curved scissors and severed the optic nerve with all the ciliary nerves which enter the eye from the posterior axis of the eye-ball. The divided muscle was then replaced and stitched in its normal position. When the boy awoke from the chloroform anæsthesia, all pain in the eye had disappeared, nor

has he suffered at all since the operation. The promises are most excellent for the retention of a good-looking eye—ininitely better than any artificial eye that could be inserted.

New Hampshire State Medical Society.

The Eighty-Ninth Annual Meeting was held in Union Hall, Concord, on Tuesday, June 17th, and the following day, and was well attended—there being 125 members present. The President, Dr. Alonzo F. Carr, of Goffstown, filled the chair. The session was opened with prayer by the Rev. A. C. Hardy, of Concord, after which, the usual committees were appointed.

The Report of the Council was read by the Secretary, showing that twenty-seven physicians had been licensed since the last annual meeting under the law regulating the practice of medicine and surgery, and that there were twenty-five applications to become members of the Society. All the applicants who were present were admitted on ballot, and took part in the exercises.

Delegates were present from Vermont and Massachusetts.

Dr. Carr delivered the President's Address, which was retrospective as to the history of medical science in New Hampshire—its subservience to quackery in olden times, and congratulatory because of the great advancement it had made, and the growing universality of popular appreciation of its value, and the reliance to be placed upon it. While no disparagement was cast upon physicians of half a century ago, many of whom were highly educated and in advance of their time, the causes which induce disease, as well as its natural history and symptoms, had, in more recent years, commanded deep research, and the result has been notable progress; the diagnosis of what was wont to be obscure was now made easily recognizable. Important movements had been made by State governments, and valuable data had been elicited through reports of State Boards of Health, on hygiene, etiology, climatology, epidemics and drainage.

The necessity of establishing a State Board of Health was strongly urged—the experience of even one disease, diphtheria, being alone a strong inducement for the creation of such a body. No plea of expense should hinder the selection of health officers, whose duty it would be to seek for the cause of epidemic disease, and to suggest the best manner to meet and overcome its direful influence. New Hampshire is regarded as a very healthy State; but as the population crowd

into the larger cities and towns, sanitary regulations must be more strictly observed. Else, sooner or later, epidemic influences will be developed, and an increased mortality will show the results of inattention to hygienic measures. Dr. Carr was of the opinion that New Hampshire would ere long come into a line with Massachusetts, Rhode Island and Connecticut.

In continuation of his address, the President gave a very interesting dissertation on "The treatment of fracture of the lower end of the radius," which was illustrated by drawings and splints. It would be impossible to give any intelligent abstract of this paper in this report, without taking too much space. Suffice it to say it was listened to with much interest by the Society, and it is well understood that the author several years since gave to the profession a valuable appliance for the treatment of Collis' fracture, known as "Carr's Splint."

Dr. Chas. C. Odlin, of Exeter, at the request of the Society, gave a graphic account of a case of *rabies* which he was attending. [The patient was a young man of twenty, who had been bitten by a cat a year ago, and who had died since this meeting began; and Dr. Odlin will report the case in full at the next annual meeting.]

Dr. Odlin then read the Annual Oration—his subject being the "Country Doctor;" and the duties, disabilities, responsibilities, discouragements, and special exposure to criticism and censure of that hard worked individual were graphically and humorously described.

Dr. Twitchell, of Keene, read an elaborate essay on Medical Ethics, in which he took the ground that to practice according to the letter and spirit of the Code, was simply to be professional gentlemen, and to "do unto others as ye would they should do unto you." He drew upon his professional experience to show how the consulting physician, by word or deed, often undermined the attending physician, and denounced in strong terms the wrong such a principle brought about. He further characterized as unworthy of the conduct of a gentleman and a physician the thoughtless custom of having one's name brought into notoriety in our daily papers, or of appending names to the certificate of designing parties, who are seeking to sell mineral spring water or some special article of medicine.

The Annual Dinner.—The Society, with its invited guests, including Gov. Heal, Mayor Brown, of Concord, and others, sat down to dinner at the Eagle Hotel at half-past two, Tues-

day—Dr. Stillings, of Concord, presiding as anniversary chairman. Interesting post-prandial speeches by the Governor, Mayor, the President and others were made in response to appropriate sentiments.

On reassembling after dinner, interesting papers were read by Dr. D. S. Adams, of Manchester, on "Differential Diagnosis of Mammary Tumors;" and an elaborate report on Gynæcology was presented by Dr. S. C. Whittier, of Portsmouth.

During the evening session, there was a report by the Committee on Necrology—Dr. Lathrop, of Dover, chairman—and appropriate obituary notices were read.

By special invitation, Dr. T. A. Watson, of Groveton, read a report of an epidemic of diphtheria, which occurred in his practice in 1878, which was discussed at length and ordered to be printed.

Dr. Hill read a paper entitled "Medical Testimony."

On Wednesday, there were reports from delegates and committees, with reports and discussions of cases.

The following officers were chosen for the ensuing year: *President*, Thomas J. W. Pray, M. D., of Dover; *Vice President*, Granville P. Conn, M. D., of Concord; *Secretary*, Moses W. Russell, M. D., of Concord; *Treasurer*, Lyman B. How, M. D., of Manchester; *Anniversary Chairman*, F. A. Stillings, M. D., of Concord; *Executive Committee*, Drs. P. A. Stackpole, of Dover; J. W. Parsons, of Portsmouth; and A. H. Crosby, of Concord. A Council of twenty members, and a Board of Censors of ten members were also elected.

Some time was consumed in discussing matters pertaining to the by-laws of the Society; and the reports of the delegates to Dartmouth Medical College were read and accepted, as well as the Treasurer's report.

The Society then adjourned until the third Tuesday in June, 1880.

Colorado Medical Association.

The Ninth Annual Session convened at Colorado Springs, Tuesday, May 20th, 1879—the President, Dr. A. Stedman, of Denver, in the chair.

Dr. Stedman opened the proceedings with an address on general professional topics, and devoted much attention to a review of medicine as it has progressed in Colorado during the past year.

Dr. F. J. Bancroft, of Denver, made a report upon Hy-

giene—especially as it affected females, and showed the influence of their modes of dress, such as the use of stays, etc., upon health.

Dr. Beshoar, from the Committee on Practice of Medicine, submitted a report on the "Proper Feeding of Babies," which was referred to the Publishing Committee.

During the second day, Dr. Charles Dennison, of Denver, presented two papers—one with reference to meteorological matters in the territory ranging from Wyoming to Old Mexico; the other, one of great general interest, and which is printed in full in the *Denver Daily Chronicle*, May 22, 1879, on "Out-Door Life in Colorado."

Dr. B. P. Anderson, of Colorado Springs, read an able and exhaustive paper on the "Medical and Climatic Treatment of Pulmonary Consumption," which was referred to the Committee on Publications.

Dr. H. A. Lemen, of Denver, read a paper on "Bright's Disease of the Kidneys," which was likewise discussed and referred.

Dr. Reed presented a paper on "The Effects of High Altitude on Pulmonary Hemorrhage," which was a continuation of one read at a previous session. This able paper elicited a very excellent discussion.

Election of Officers.—President, Dr. B. P. Anderson, Colorado Springs; Vice Presidents, Drs. H. A. Lemen, of Denver; M. Beshoar, of Trinidad, and E. W. Cushing, of Trinidad; Secretaries, C. C. Lathrop, of Denver, J. J. McDonald, of Denver, and J. A. Hart, of Colorado Springs; Treasurer, Dr. W. F. McClelland, of Denver; Committee on Admission, Drs. W. R. Whitehead, Jesse Hawes, S. E. Solly, F. J. Bancroft and A. Stedman.

During the third day, the newly elected officers were installed and the committees appointed.

Papers were read by Drs. Buckingham, Beshoar, McClelland and McDonald, which were duly referred.

Denver was chosen as the place of the next meeting.

[Our Virginia readers especially will remember the newly installed President, as the distinguished visitor from Colorado during the session of the Medical Society of Virginia last Fall, and who favored the Society with a paper on the "Influence of Colorado Climate upon Health and Disease."—*Editor.*]

Richmond Academy of Medicine.

April 1.—**Relative Value of the Cinchona Alkaloids.**—Mr. Hugh Blair, late President of the Richmond Pharmaceutical Association, was invited to participate in the discussion of this subject. He stated that in view of the possibility, if not probability, of a quinine famine, the inquiry concerning the relative value of the cinchona barks becomes important. The use of quinine is increasing, and the source of supply is decreasing. The British Government have made a successful attempt at its cultivation in India, but so far, not enough has been obtained to meet the want of India. It is estimated that a hundred thousand lives could be saved in India if sufficient quinine could be procured. Not many years have passed since the time when quinine was used only as a remedy in malarious fevers and as a tonic. At the present day, its use is much extended and is extending. Its influence over the cerebro-spinal system, and its powerful antiseptic properties, give it a wide therapeutic range. The important alkaloids of cinchona bark may be classed under two heads, quinia and cinchona. For practical purposes, we name only three of each series: quinia and quinidia, and quinicia and cinchonia, cinchonidia and cinchonicia. Of all these, quinidia is the nearest approach to quinia. It is isomeric with quinia, and is prepared by the same pharmaceutical process. In all cases (we know nothing to the contrary) it has sustained its reputation as the most efficient substitute for quinia. And in the report of the Medical Commission of the Madras Government, it is placed at the head of the cinchona alkaloids in the cure of malarial paroxysmal diseases. Its price, at present, is about one-half of the price at which quinia is sold.

Cinchonia has been known for years, and has been used with some success as a substitute for quinia. Its low price is much in its favor. It is liable to disagree with some stomachs. Combined with quinia, it has often proved serviceable in the treatment of intermittents. In consequence of the very high price of quinia, cinchonidia has been largely used for the last two years, and has proved to be a decided success. So much so that the price has advanced 100 per cent.

For many years a resinous substance has been on the market labelled "chinoidine." It has always been recognized as an exceedingly valuable agent. It is made by concentrating the mother waters left after the extraction of quinia. It is

one of the chief (if not the chief) ingredients in the "magic pill," which pill has gained such reputation for the cure of ague and fever in this neighborhood. Its chemical constitution is uncertain. It has been called amorphous quinia, because it also is isomeric with quinia.

Parrish says, that from it the cinchona alkaloids, except quinia, have at times been prepared. It is said that chinoidine is a product of alteration of the cinchona alkaloids. Its price is much less than that of any other product of cinchona bark.

Probably the best substitute for quinia is quinidia. Dr. Pepper, of Philadelphia, used it in the same or less dose than quinia, with equal success, and there are sufficient testimonials, from the best sources, to substantiate the fact that in practice it is, one would almost say, equal to quinia.

Dr. James B. McCaw said that recently he has found quinia in full doses one of the most potent remedies for *labor after-pains*. He mentioned the case of a lady lately under his charge who had borne six children—always having an easy delivery, but suffering after-pains of a most painful character for five or six days. Formerly, he used camphor and opium, enemata of morphia, etc., but could not succeed in cutting them short. In her last confinement, he determined to test the quinia treatment, and gave her five grains of sulphate of quinia after the first after-pain (which was very severe), and repeated the dose at the end of four hours. The remedy acted like a charm—perfect relief from these pains resulting.

Dr. O. Fairfax stated that, in his hands, quinia had yielded the same results as spoken of by Dr. McCaw—being much more certain in its action, and is not followed by the train of unpleasant symptoms so frequent after the use of opium.

Dr. L. B. Edwards had used quinia regularly for the purpose named ever since he saw the recommendation in 1874, made by Dr. Wm. Goodell, of Philadelphia, in one of his exchanges.

Dr. O. A. Crenshaw had used quinia for after-pains, and was satisfied that no better remedy existed.

The President, Dr. M. L. James, did not think that the *antipyretic effects of quinia* was sufficiently recognized by the profession at large. Quinia should be used vigorously, in 5, 10, 15 or even more grains doses, with the distinct object of subduing fever at once. In his own person, he has had four or five attacks of odonto-periostitis; and after the failure of leeches and other means, he had always found prompt relief

after large doses of sulphate of quinia. He has taken as much as 60 grains a day for the purpose. Slight cinchonism followed, it is true.

Dr. John M. Payne was called to a child, aged 23 months, with a *congestive chill*. The child was found to be in a profound stupor. In the course of two or three hours, he administered 14 grains of quinia sulphate, and the child rallied. He does not believe, however, in such large doses for one so young, except in rare cases, as just stated.

Drs. O. A. Crenshaw, J. B. McCaw, L. S. Joy nes and O. Fairfax, opposed the use of quinia in such doses as were recommended by Dr. James—each one of these gentlemen having seen permanent deafness produced by over-heroic quantities of this valuable drug.

Dr. James replied that although he had time and again used quinia in what is called excessive doses, and had known like doses to be given by other practitioners, he had never seen nor personally known of a case permanently injured by the drug. He ought to have added, however, that of recent years, whenever giving quinia in commanding doses, he combines it with hydrobromic acid, which considerably modifies the bad effects of quinia, without impairing its antipyretic action.

April 15.—Asthma.—The Secretary, Dr. Chas. S. Brittan, reported a case of *cardiac asthma*, for which he has tried all the usual remedies without relief. There was insufficiency, with regurgitation through the mitral valves: probably there is now also dilatation. Dr. M. L. James has also seen the case and confirms this diagnosis.

Dr. H. H. Levy had used *grindelia robusta* most faithfully, but without benefit in two cases of ordinary asthma. However, in one of the cases—a lady—relief was afforded for awhile by 30 grains doses of potassium bromide with *grindelia robusta*. After this had lost its effect, *lobelia* seemed to act well.

All the usual remedies mentioned in the text-books were recounted by the several different speakers—including the use of amyl-nitrite internally by Dr. Levy, by means of which he had relieved an attack of asthma very promptly.

Dr. O. Fairfax remarked that, among the pathological conditions which stand in the relation of cause of asthma, a uræmic condition will be found to exist in some cases. A case has come under his observation, in which the asthmatic symptoms were marked and severe, with livid countenance, etc., during the spasms. But physical examination showed

that the lungs were clear, except a slight crepitation in the supra-scapular region, and there were no signs of heart disease. The embarrassed respiration was first attributed to some obscure neurotic trouble, but further examination revealed œdema of the face and hands. The urine had a specific gravity of 1013, and contained, by the eye, about 25 per cent. of albumen, besides casts, epithelium, blood globules, etc. Diuretic treatment restored the kidneys to work, and then the œdema and the asthma disappeared. Dr. George Johnson says this kind of asthma is due to uræmia, which acts on the vaso-motor nerves as an irritant, causing spasm of the pulmonary arterioles with excessive constriction, thus interrupting the capillary circulation.

May 6.—**Progressive Locomotor Ataxia.**—Dr. F. D. Cunningham believes that there are no recoveries from this disease, although it may sometimes be held in check. He had noticed, as the causes of his cases, mental over-work and dissipation; in one, the patient frequently got drunk in his younger days, and slept on the roadside in bad weather.

Dr. Wm. R. Weisiger (of Manchester), has had three or four cases in his practice. In one case, the disease first manifested itself by neuralgic pains in the limbs, with a peculiar eruption immediately over the seat of pain. Belladonna afforded most relief for this symptom. But the disease steadily progressed for twenty years—the patient finally losing all control over the bladder. This case was traced to alcohol and the excessive indulgence in venery. In another patient—an old woman—the cause was mental anxiety, due to family misfortune. The brain became seriously involved, and she died a perfect imbecile. Before death, she had a peculiar disease of the joints—the heads of the bones undergoing severe destructive inflammation. The pathology, as is well known, consists of sclerosis of the posterior columns of the spinal cord. For the preservation of pathological specimens of the cord, he would advise the use of bichromate of ammonium for hardening purposes; purpurine was, however, suggested for staining purposes. Dr. Weisiger thinks we are too prone to overlook the premonitory symptoms of this disease. In a case noticed by him, the patient first complained of floating specks in the eyes, with loss of the power of co-ordinating vision, a drawing back of the body in locomotion, loss of virility, and later, the usual disturbance of locomotion, attended with violent cramps in the muscles of the abdomen. He commenced treatment with minute doses of phosphorus in capsules. At the end of a year, hypophosphite of soda

was substituted, which produced a peculiar excitement, compared by the patient to an overdose of strong coffee. There was a great desire for work—a kind of mental erythlism. Under this treatment—two or three grains of the hypophosphite three times daily, and abstaining from tea, coffee, alcohol and tobacco—the patient slightly improved. Dr. Weisiger considers the hypophosphite of soda one of the best nervine tonics—superior to Percy's Vitalized Phosphates. He advises its use during severe mental labor. In the case last referred to, permanent injury to the eye resulted. Electricity did no good. He now has a patient under treatment by the use of Buffalo Lithia Water, and he, thinks, with benefit.

Dr. J. Grattan Cabell stated that in one case, which was marked by incontinence of urine due to bladder trouble, and irritability of the rectum, great benefit resulted from the use of ergot, which also relieved the muscular subsultus.

Dr. L. S. Joynes remarked that Dr. S. Weir Mitchell, some years ago, called attention to the influence of rest on the affected muscles. He mentioned the case of a woman who had ataxic symptoms, who was apparently cured by rest in bed, due to the treatment of a broken leg. Other cases have been relieved by similar treatment. Dr. W. A. Hammond recommends crutches, so as to relieve the legs of the weight of the body. Dr. Joynes hopes this treatment will be given a fair trial.

Analyses, Selections, &c.

Posture as a Means of Relief in Hernia.—Prof. Frank H. Hamilton, A. M., M. D., Surgeon to Bellevue Hospital Medical College, etc., New York, in a paper read before the New York Academy of Medicine (*Hospital Gazette*, June 7th, 1879), presents the following conclusions:

First, as to our ability to increase the diameter of the hernial apertures, except by resort to herniotomy.

1. The hernial apertures are not, only with few exceptions, and then usually only in a small degree, either directly or indirectly under the control of the muscles. Relaxation of the muscles does not, therefore, usually relieve hernial strangulation.

Muscular spasm is never a cause of strangulation.

2. Posture, whether intended to relax the muscles, the tendons or the fasciæ, does not relax the apertures when the

seat of stricture is in the sac itself—when the hernial aperture is old and has become established, or fixed in its form—or has become a canal in some sense independent of the original aperture. Nor does it relax these openings in cases of inguinal or femoral hernia, when the strictures are at the internal rings; and in both of these herniæ the strictures are, in most cases, at the internal rings.

3. Neither ointments, nor warm nor cold applications, effect in any way these apertures, or the seats of stricture, whether these be superficial or deep-seated.

4. Neither chloroform, nor bleeding, nor the hot bath, nor, indeed, any other general or constitutional measures, affect the hernial apertures—that is, cause them to become relaxed and to dilate—except, perhaps, in the case of recent herniæ, which have suddenly pushed their way through tendinous or muscular fibres; and even in these cases, their effects are often questionable, and certainly trivial.

5. In short, hernial apertures can seldom be relaxed or opened by any measure except by a surgical operation. The apertures do not, only with rare exceptions, actively compress the protruding viscera; but the viscera become constricted by pressure against the apertures. Relaxation of these apertures is not, therefore, ordinarily a part of the mechanism of the release of a strangulation, and of the return of the viscera.

Second, as to the effects of Taxis and Inward Traction.

1. Taxis, or pressure from without in, judiciously applied, is first in point of importance as a means of reducing strangulated hernia.

2. Inward traction, judiciously employed, is only second in point of importance to taxis. Inward traction is effected indirectly by paralysis of the abdominal muscles, through the agency of posture or of general muscular relaxants, and by emptying the bladder and lower gut. It is effected directly by peristalsis, anti-peristalsis, and gravitation through the agency of posture.

Hitherto, relaxation of the apertures has occupied the second rank, or the position now assigned to inward traction, and the latter has been either entirely disregarded, or it has been assigned only to a subordinate position.

3. Emptying the bladder and rectum and distracting the attention of the patient, are measures which remove certain obstacles to reduction by taxis, and indirectly favor or encourage inward traction.

4. Chloroform, bleeding to syncope, and the hot bath to

syncope, act indirectly by overcoming the resistance of the abdominal muscles, and possibly they may in some measure effect their results directly by increasing peristaltic and anti-peristaltic motions, or, at least, by permitting the normal actions of the intestines to continue, while the abdominal muscles are in a state of paralysis.

Ice, as a local application, can only relieve the button-holing when it is due to congestion of the vessels, and then only when the circulation in the vessels is not completely arrested. If the patient is at the same time reposing upon his back, it serves also as a continued taxis.

5. Opium operates, probably, only indirectly, by causing a partial paralysis of the abdominal muscles.

6. Emetics probably effect their good results directly, by virtue of the inward traction caused by the upheaval of the abdominal viscera, and by anti-peristalsis.

7. Purgatives, given by the mouth, act directly by inducing anti-peristalsis above the seat of stricture, and in some cases peristalsis below the seat of stricture. They sometimes also cause vomiting. Their mode of action is, therefore, similar to, or identical with emetics. They are both liable to do harm when not successful.

8. Stimulating enemata cause generally only violent peristalsis, but occasionally anti-peristalsis. Tobacco enemata operate in the same way; and perhaps, sometimes by causing general muscular paralysis, and thus removing the resistance of the abdominal muscles. Their effect upon the hernia are then both direct and indirect.

9. All postures in which the viscera are dragged toward the upper portion of the abdominal cavity aid reduction directly, by causing an inward traction; and that posture is the best, which, whilst it does not interfere with taxis and relaxation of the abdominal muscles, makes the most effective inward traction. Inversion of the body, however, displaces the viscera so far toward the upper part of the body that the abdominal muscles cease to have any power to expel the viscera downwards, and their relaxation is then a matter of no consequence.

The McDowell Monument, erected almost entirely by the profession of Kentucky, was unveiled May 13th, 1879. We make the following extract from the *Obstetric Gazette*, June, 1879:

“The monument is a plain gray granite shaft erected in the centre of the old Danville burying-ground. The State

Society has purchased the lot, and it is being handsomely graded and enclosed. You pass the monument as you drive into the town.

On the front face of the shaft is a medallion of McDowell. Beneath is this inscription: 'A Grateful Profession Reverses his Memory and Treasures his Example.' On the other sides are those additional inscriptions: 'Beneath this Shaft Rest the Remains of Ephraim McDowell, M. D., the Father of Ovariotomy. By Originating a Great Surgical Operation He Became a Benefactor of His Race, Known and Honored Throughout the Civilized World.'

'Born in Rockbridge County, Virginia, 1771. Attended the University of Edinburgh, 1793. Located at Danville in 1797. Performed His First Ovariotomy in Danville in 1809. Died in Danville, 1830.'

'Erected by the Kentucky State Medical Society, 1879.'

The conception of this monument is due to the late Dr. John D. Jackson, one of Kentucky's most accomplished physicians, and it seems sad that he was not spared to participate in the completion of his cherished wish.

The oration was to have been delivered by Dr. W. L. Atlee, and upon his death, Dr. McMurtry, Chairman of the Committee of Arrangements, secured Dr. Samuel D. Gross to perform this duty.

The dedicatory exercises were held in the Presbyterian Church, which, at an early hour, was closely packed with a brilliant and distinguished assembly.

Dr. Gross occupied an hour and a quarter in the delivery of his oration, which is pronounced by all who knew him, to be the great effort of his life. It was a most masterly review of the life and character of McDowell—together with a picture of his first operation—the heroism of the woman as well as the surgeon—its individual success, its bitter criticism, its ultimate triumph as a surgical propriety, its extension of the probabilities of female life. All these were painted in such a style that while much was necessarily technical, yet the large audience listened with eagerness to the orator to the last closing word. The Kentucky State Medical Society will issue a memorial volume of these dedicatory exercises, at an early day, in which, of course, this oration will appear complete."

The Stevens Triennial Prize of \$200 (established by Dr. Alex. H. Stevens, of New York) will be awarded in 1882. Subjects are I. Lesions of the Brain in Connection with the Two Forms of Diabetes. II. Diphtheria in its Relation to Membranous Croup.

"The competing essays on either of the above subjects should give an account of our present knowledge and also the results of personal investigation. They must be transmitted to the President of the College of Physicians and Surgeons, New York, on or before the first day of January, 1882. Each essay must be designated by a device or motto, and must be accompanied by a sealed envelope, bearing the same device or motto, and containing the name and address of the author. The envelope belonging to the successful essay will be opened, and the name of the author announced, at the annual commencement of the above-named college, in March, 1882. This prize is open for universal competition. J. C. Dalton, M. D., *Secretary of the Commission.*"

New Anæsthetic.—Dr. Edward Warren, in his regular letter to the *North Carolina Medical Journal*, June, 1879, says:

The French journals contain an account of the successful employment of Professor Bert's new *anæsthetic*, which consists of nitrous oxide 85 parts, and oxygen 15 parts, under tension. Professor Labbé, the distinguished surgeon of Larboisière, having occasion to remove an ingrowing toe-nail, carried his patient to the "Ærotherapic Establishment" of Dr. Daupley, and administered the anæsthetic in a chamber, the atmosphere of which had been compressed to 92 centimètres. After the lapse of a few seconds the patient became perfectly insensible, and the operation was performed and the dressing completed, without the slightest manifestation of pain at the time, or the development of any unusual symptom afterwards. Under ordinary conditions this mixture of nitrous oxide and oxygen produces no effect upon the economy, while its employment under tension results in the speedy development of an anæsthesia which is profound enough to render surgical operations painless, and of so innocent a character as to preclude the possibility of a dangerous complication.

Ammoniacal Sulphate of Copper for Neuralgia.—In a recent communication to the Académie de Médecine, M. Fereol, of the Hospital Larboisière, asserts the positive value of ammoniacal sulphate of copper in the treatment of neuralgia. He states that in cases in which every treatment has failed, even the administration of gelseminum and of aconitia, a cure or remarkable relief may be obtained to the most severe symptoms by this drug. Among the examples he gave of its use are the following: Trifacial neuralgia of two months' dura-

tion with absolute (?) insomnia, was unrelieved by the extraction of teeth, quinine, bromide, aconitia, or tincture of gelseminum, hypodermic injections of morphia, or arsenic. From the first day of the administration of the ammonio-sulphate of copper there was a notable remission in the symptoms and cessation of the insomnia. In one case the dose was pushed to eight grains without any other accident than nausea. It has the drawback of occasioning a persistent metallic taste in the mouth. Only one case of intolerance was met with; in that, a grain and a half of sulphate of copper occasioned violent vomiting. (*The Lancet*, April 26, 1879; *The Practitioner*, June, 1879.)

[The following is the recipe used by M. Fereol: Distilled water, 100 grammes; syrup of orange flowers, 30 grammes; ammoniated sulph. copper, 0.10 to 0.15 egrs. M. To be taken within twenty-four hours with the food.]

Book Notices, &c.

Publishers and Authors having complimentary copies of their publications for distribution, are invited to contribute such as they can spare to the library of the Richmond Academy of Medicine, where they will be brought to the attention of a large body of influential medical men. Dr. E. T. Robinson, Richmond, Va., Librarian, etc.

Lectures on Electricity in its Relations to Medicine and Surgery. By A. D. ROCKWELL, A. M., M. D., Electro-Therapeutist to the New York State Woman's Hospital, etc. New York: Wm. Wood & Co., 1879. 8vo. Pp. 100. Cloth. Price \$1. (From Publishers.)

These *Lectures* must be familiar to the readers of this journal, having been "published in consecutive numbers" of the same. The writer read each of the papers with the strictest attention as they were being published; hence it is easy for him now to give his impressions.

Messrs. Wm. Wood & Company have done the profession a service in collecting these Lectures into a neat, handy volume. There is nothing pretentious in Dr. Rockwell's style of writing; but on every page he evinces a familiarity with the subject in hand that has not been acquired by many of the so-called authors. The book is simple enough for the college student to adopt as his text-book—indeed, these are the *Lectures* which the Doctor delivers in part to his class. At the same time, he teaches the principles of general fara-

dization and central galvanization with an ease and perspicuity that does not lead the student to imagine that he is acquiring knowledge of some of the most intricate and important subjects connected with electrology. Until a new edition of the systematic practical treatise by Drs. Beard and Rockwell is published, this little volume becomes an essential appendix to the present edition of the larger work. This book is fairly illustrated by wood illustrations of the different forms of electrical batteries and instruments, and well illustrated by clinical reports of cases to support the views enunciated in the text.

Although the headings are made with distinctive type, still we think an improvement in the volume would have been the addition of an index to facilitate references. The book is very cheap at \$1.

Diseases of the Intestines and Peritoneum. New York: William Wood & Co., 1879. 8vo. Pp. 243. Cloth. Price \$1.25 per volume, or to Annual Subscribers \$1. From Publishers.

This is the sixth volume of "Wood's Library of Standard Medical Authors." No one who has subscribed to this series can regret having done so, for he must feel that he is reaping a good return for the money expended.

The present volume is especially valuable. Six of the most distinguished English authors contribute to this work. John Syer Bristowe, M. D., F. R. C. P., the distinguished author of the well-known work on *The Theory and Practice of Medicine*, is the principal contributor—having written the chapters on Enteritis, Obstruction of the Bowels, Ulceration of the Bowels, Cancerous and Other Growths of the Intestines, Diseases of the Cæcum and Appendix Vermiformis, Tubercle of the Peritoneum, Carcinoma of the Peritoneum, Affections of the Abdominal Lymphatic Glands and Ascites. S. O. Habershon, M. D., author of the best work ever published on *Diseases of the Abdomen*, is the next most prominent author, having papers on Diarrhœa, Diseases of the Duodenum and Abdominal Tumors. John Richard Wardell, M. D., F. R. C. P., furnishes chapters on Enteralgia and Peritonitis. J. Warbererton Begbie, M. D., F. R. C. P. E., gives the chapters on Colic, Colitis and Dysentery. Thomas Blizard Curling, M. D., is the author of the Section on Diseases of the Rectum. And W. H. Ransom, M. D., furnishes the best chapter we have ever seen in any work on Intestinal Worms. We have been so particular to name the authors of the several

articles simply that the reader may at once see the authoritative character of the book. Every page is of the greatest practical value to the physician.

A Treatise on the Diseases of Infancy and Childhood. By J. LEWIS SMITH, M. D., Clinical Professor of Diseases of Children in Bellevue Hospital Medical College; Physician to the New York Foundling Asylum, and to the New York Infant Asylum, etc. Fourth Edition, thoroughly Revised, With Illustrations. Philadelphia: Henry C. Lea. 1879. 8vo. Pp. 758. Leather. (For sale by Messrs. West, Johnston & Co., Richmond.)

That this work has become standard is shown by the fact that a fourth edition has so soon been called for. It is a magnificent work, and essential to every true practitioner's library. It is not a book written by one whose object is simply to advance a theory of his own; but its every page shows rather the handwriting of one who has studied his subject, consulted the best of literature, made practical tests of the plans of diagnosis and treatment, and publishes what experience proves to be true. As there is no one book that we have ever seen in any language that equals it, as a practitioners' guide or as a text-book on diseases of children, we need not undertake an analytical examination; but we do most unreservedly commend this edition, as we did the former, to every practising physician. He will have almost daily use for it.

American Health Primers. Edited by W. W. KEEN, M. D., Fellow of the College of Physicians of Philadelphia, etc. Lindsay & Blakiston, 1879. 16mo. Cloth 50 cents each. (For sale by Messrs. West, Johnston & Co., Richmond.)

The first two of these "Primers" have been received. The first one is on "*Hearing, and How to Keep it*," by Charles H. Burnett, M. D., Consulting Aurist to the Pennsylvania Institution for the Deaf and Dumb, etc.—pages 152. The second one is on "*Long Life and How to Reach it*," by Joseph G. Richardson, M. D., Professor of Hygiene in the University of Pennsylvania, etc.—pages 160. The author of each "Primer," to follow in monthly issues, as announced in the publisher's advertisement, is selected with special reference to his accredited competence. Perhaps it may be said that too many of the authors are Philadelphians to entitle the series to the title of "*American Health Primers*." But the design of the series is good, and, judging what is to follow by the practical value of the two "Primers" just issued, the series should be

patronized alike by physician and patient. It is surprising to see how much of good sound practical advice physicians themselves may receive from these Primers—advice that should be familiar with every practitioner. The series is most cordially recommended.

An Atlas of Human Anatomy, Illustrating Most of the Ordinary Dissections, and Many not Usually Practised by the Student, Accompanied by an Explanatory Text. By RICKMAN JOHN GOODLEE, M. S., F. R. C. S., Senior Demonstrator of Anatomy in University College, etc. Philadelphia: Lindsay & Blakiston, 1878. (Atlas in Royal 4to. Text 8vo.) Price \$2.50 a Part.

This is Part III of the best Anatomy in course of publication. We have in other numbers pointed out its special excellences. Surgeons, anatomists, physicians and students, all need it.

Visions—A Study of False Sight (Pseudopia). By EDWARD H CLARKE, M. D., with Introduction and Memorial Sketch by OLIVER WENDELL HOLMES, M. D. Boston: Houghton, Osgood & Co., 1878. 12mo. Pp. 315. (For sale by Messrs. Randolph & English, Richmond.)

This is a clever book. Physiologically and psychologically considered it is not altogether new; and yet, it may be regarded as a contribution to these departments of science. A casual glance of its contents might lead one to suppose that it was purely materialistic in its doctrines, since he relegates so much of mental action to pure automatism. His whole theory, however, of visions and dreams redeems the essay from this suspicion. Whether or not Dr. Clarke has fully solved the strange phenomena of visions and dreams by his physiological analysis of vision, and the effects of drugs on the brain remains to be tested by a larger range of induction of facts. The book is well worthy of a careful study; and, as it involves but a small investment, we do not hesitate to say that it will pay. The Introduction by Dr. Holmes is a literary gem. Nothing less than a careful review of the whole essay would give the reader an insight into the drift and design of this unique production.

PAMPHLETS REPRINTS, ETC., RECEIVED, for which we have not the space to give further notice, but copies of which can generally be obtained by enclosing postage stamps in letters of request to the authors named.

Annual Report of the Board of Health of the City of Richmond for the Year 1878. Pages 46. Dr. J. GRATTAN CABELL, Richmond, Va., President of the Board.

The Microscope in its Relation to Medicine and Cerebral Pathology. By J. N. DEHART, M. D., Late Assistant Physician to the Hospital for the Insane, Mendota, Wisconsin. (From *Chicago Medical Journal and Examiner*, March, 1879.)

Opium as a Tonic and Alterative, and its Hypodermic Use in the Debility and Amorosis sometimes consequent upon Onanism. By B. A. POPE, M. D., New Orleans. (From *New Orleans Med. and Surg. Jour.*, Feb., 1879.)

Editorial.

The Metric System—The following circular, No. 46, is issued by the Metric Bureau office, 32 Hawley street, Boston, entitled "What We Have to Meet," presents a view of the subject which should be duly considered.

"We, the undersigned, Assistant Physicians of ———, do beg that you reconsider your order concerning the Metric System, and postpone it at least during our term.

"We respectfully request this for the following reasons :

"1st. We have never been taught the Metric System in our Medical Colleges.

"2d. We were considered competent by the Board of Health to practice, and were not interrogated in respect to this system. We know nothing more now than then concerning it.

"3d. That neither our professors or the first physicians of the city use it.

"4th. All of our text-books are in the old system, and none in the new.

"5th. We have no recognized authority for doses in the new system.

"6th. In changing the doses from the old system to the new, there is always a chance for mistakes and inaccuracies.

"7th. That few, if any, druggists in the city are prepared to fill such prescriptions, and when we leave we will be compelled to use the old system.

"8th. That the remaining time that we have is so limited, and having so much to learn, we would rather spend it so as to give us the greatest advantages.

"Hoping that this will meet with your approval, we remain,

Yours respectfully."

Eight signatures.

Tantaene animis caelestibus iræ! Mountains and molehills!!
"Who would have thought the old man had so much

blood"!!! It is three and a-half months since the above petition was sent in, and the senders have already seen the error of their ways, and now each and all use the Metric System exclusively. Such a document points a moral, look before you leap; and furnishes a text, *non omne ignotum pro malefico*. Let us answer in detail the "reasons" given.

1st. Nor have they been taught where and how to purchase the horse and buggy which are to furnish them "rapid transit," physically speaking, as does the Metric System, speaking intellectually. Both are to be obtained for their own sake. Fortunately, the latter is easily acquired.

2d. Is one never to know more upon any point than what was forced into him at school? As far as physicians are concerned, the system may be learned in five minutes forever.

3d. More shame to them, then! But it is not to them; it is precisely the younger men to whom we look for progress. In some parts of the world, the ground is even to-day still harrowed and ploughed with branches.

4th. *All* text-books, except those in the English language, are in the Metric System. Also, all other books and articles, and many of these last even when written in English.

5th. No "authority" is needed to prove that twice two is four. The whole system may be reduced to this. Knowing your grains, drachms and ounces, multiply grains by .06; drachms by 4; ounces by 30. *Voila tout!* "Only this and nothing more." On these three, hang all the Metric Lore and profits!

6th. Is there, then, a magical potency in exactly the old proportions? O! superstition dies hard. The only "chance" is for *improvement*; for, as the .06 (*Drug*) is *less* than a *grain*, while 4. and 32 (*Vehicle*) are *more* than the *drachm* and *ounce*, there is *no* danger of giving too large doses of strong drugs, and polypharmacy, the opprobrium of our profession, is curtailed, while idiosyncrasies can be better allowed for.

7th. *All* druggists *must* be "prepared to fill such prescriptions," for the Metric System is *legalized* in the United States already, and the law compels them. All that is needed is for them to *buy the weights*, and that for a mere trifle. *Educated* pharmacists in their own work use *only* the Metric System. In the Eastern States, the druggists were far in advance of physicians in its use. Distrust, *as ignorant*, every "druggist" *not* "prepared to fill such prescriptions." Nor will you ever be "compelled," *or even willing*, to go back "to use the old system." *Nulla vestigia retrorsum!*

8th. Then, learn, *and use*, the Metric System, *thus saving time for study.* Q. E. D.

Moral.—We need a benevolent despot who would *compel* the use of the Metric System here after a fixed day. After a week, no one would have any more trouble; after a month, people would wonder how they could ever have used anything else, the labor of learning is so slight, the gain immense.

All the poor peasants of Europe, the lower classes of "effete despotism," etc., have been able to adopt it *at once*, and yet Americans, self-ruling, are really too lazy, while merely claiming to be too stupid to do so. Shame on a country which "to a party gives up what was meant for mankind." Signed, Edward Wigglesworth, M. D.

Scheffer's Saccharated Pepsin has been so long before the profession that it is not necessary to speak of its general uses. We wish simply to remind practitioners that at this time it has special claims upon their attention for the diseases of childhood incident to the season. An advantage of Scheffer's pepsin is that it can be combined with other agents as required to make lactopeptine, chlorinated pepsin, etc.

Dr. George Ben. Johnston, of this city, has been elected Professor of Anatomy in the Southern Medical College—the new medical college which is to be opened this fall in Atlanta, Ga. We congratulate the Board of Trustees in making so excellent a selection.

The Buffalo Lithia Springs, in Mecklenburg county, Va., under the management of its owner, Col. Thomas F. Goode, have deservedly won a national reputation. Now that the springs-going season is at hand, we wish to call the special attention of physicians to them. Patients may be promised every attention that it is possible for a proprietor to extend. The virtues of the water are in a great measure stated in the advertisements of the Springs which appear in the *Monthly*; and according to the testimony of eminent practitioners who have tested the waters, these virtues are not overstated. Indeed, most of the advertisements contain the records of cases by physicians who are able to judge better than patients of the results.

Colored Medical College.—A medical college for colored medical students is soon to be established in Nashville, Tenn. The building will cost \$10,000.

Discoverer of Anæsthesia.—The National Eclectic Medical Association, at its recent session, unanimously awarded to Dr. Crawford W. Long, of Georgia, the credit of the discovery of modern surgical anæsthesia. His claims are becoming more and more established in the minds of all who are examining the matter without the bias of early education or sectional pride.

By the way, it seems that Congress has ordered the establishment of a National Gallery of Statuary in Washington, D. C. Each State is to designate two of its most famous deceased citizens, whose memories are thus to be perpetuated. It has been suggested that Georgia should contribute to this National Gallery, the Statue of Dr. Crawford W. Long, late of Athens, Ga. The scientific utility of his grand discovery, and also the world-wide benefactions which that discovery has afforded to suffering humanity make this suggestion, in our opinion, eminently proper. The Honorable Congressman from Georgia, A. H. Stephens, we are advised, is alive to Dr. Long's fame as to his discovery of anæsthesia, and will take charge of any action in the House and in Congress, that his professional brethren may think right. Will not some Georgian, at the extra session of the Legislature of that State, in July, if necessary then to act, propose the selection of Dr. Long for the purpose indicated?

Dr. Landon B. Edwards has been appointed Acting Assistant Surgeon United States Marine Hospital Service, to have medical charge of the Port of Richmond, Va.—services to begin July 1, 1879.

Dr. J. Williston Wright, formerly Professor of Obstetrics in the Medical Department of the University of New York, has been elected Professor of Surgery in the same institution, in the place of Prof. Darby, deceased, and *Dr. W. M. Polk*, lately Professor of Materia Medica in the Bellevue Hospital Medical College, is to fill the chair in the University lately held by Dr. Wright.

Queries and Answers.

Nocturnal Cramps.—A member of the profession, no longer young, and long troubled with dyspeptic ailments, and functional disorder of the heart, has lately suffered frequently and severely with *nocturnal cramps* in the muscles of the legs.

He has been more than once compelled to resort to the inhalation of chloroform to relieve the suffering. The attacks, however, have been much less frequent and less painful since the advent of hot weather. He would be obliged to any professional brother for information as to the most effectual remedies, both local and general, for the relief of this most painful affection, as well as the best means of warding off the attacks when habitual or frequently occurring. There is but little satisfactory information on the subject in our books.

PATIENS.

[We hope some practitioner will be able to suggest a means of relief in our next number to the distinguished physician who asks for information—*Editor.*]

Obituary Record.

Dr. John T. Darby, Professor of Surgery in the Medical Department of the University of the city of New York, died at his residence in New York, June 9th, 1879, in the forty-third year of his age. About two years ago, it is said, he wounded himself accidentally while performing an operation, and the septic poison is supposed to have impaired his health, and finally proved fatal. He was born in South Carolina; was an alumnus of the Medical Department of the University of Pennsylvania, and a surgeon of national eminence in the Confederate army. In 1873, he was made Professor of Surgical Anatomy in the University of the city of New York; and the next year, he became Professor of Surgery in the same institution. He held a number of professional honors, and was the author of several eminently useful papers.

Dr. Howell Lewis Thomas, of this city, died at the home of a friend in Richmond, May 2, 1879. He was the subject of an apoplectic stroke on the morning of April 30. He was born May 15, 1824; hence was in his 55th year of age. Before the war, he was one of the editors of the *Virginia Medical Journal*, and for a long period he was Demonstrator of Anatomy in the Medical College of Virginia.

Dr. Francis Fontaine Maury died at his home in Philadelphia, June 4th, 1879, in his thirty-ninth year. He was born in Danville, Ky. He studied medicine at the University of Virginia, and afterwards at the Jefferson Medical College, of which he was an alumnus.

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Original Communications.

ART. I.—Organic Forms in Their Relation to Systemic Disease III. Theory of Contagium Vivum; and IV. Conclusions.

By RICHARD H. LEMMON, M. D., Instructor in Microscopy and Practical Histology, University of Virginia.

(Concluded from page 286, July No., 1879.)

III. CONTAGIUM VIVUM. Some years ago, Farr arranged in one group, under the title of Zymoses (or diseases which resemble fermentations), all contagious, infectious, endemic and epidemic diseases. This natural classification grew out of the following facts which had been observed regarding these two processes: Both depended upon the application of an exciting cause; both had an incubative period followed by reactions not then understood, which were accompanied by certain analogous symptoms, and both were regarded as self-limited. These, and other distinguishing phenomena, were so well marked and invariable, as to make the history of the disease, on the one hand, and the phenomena of fermentation, on the other, noticeably analogous. He was thus able to correlate the two processes as regards their manifestations; of their causal conditions, however, he knew nothing. It is true that, following Meitscherlien and Berzelius, he designated the mode of action of the ferments, and the virus of the zymoses as a "catalytic"—a term invented by

those celebrated chemists to describe a process which they did not understand; but it is doubtful if any of nature's truths are ever differentiated by such feats of etymological agility; and this instance was not the exception which proves the rule.

As fermentative phenomena became more clearly understood, pathologists, applying the facts which had been established regarding them, by a natural transition, differentiated from this "catalytic" doctrine of zymoses, the present theory of "contagium vivum." We have seen how the similarity between fermentation and infectious disease had been made the basis of a nosological classification before the biological nature of the former was thought of. The following illustration will, I think, show the similarity still more marked, from the standpoint of our recent knowledge. If, to a flask containing clear hay infusion, which has been sterilized by boiling, a drop of fluid in which has been developed the *bacillus subtilis* be added, the following phenomena may be observed: After 24 hours, the infusion will look cloudy, and the cloudiness will increase for a day or two, when a film will be formed on the surface of the fluid. This film soon breaks up and falls to the bottom of the vessel, and in ten or fifteen days, the original clearness of the fluid will have returned. Here we evidently have the same succession of events as in a specific fever—viz., the application of an exciting cause, or special poison, followed by a period of incubation; next comes the period of disturbance, followed by a gradual return to the original status. There is, in both instances, generated during the period of disturbance a greatly additional amount of infective matter; and finally, in both instances, there is an immunity from a second attack on the application of the same exciting cause.

Having studied the origin of the theory of "contagium vivum," let us exactly define it in the words of one who has made it the subject of close and earnest study. "By the expression, contagium vivum," says Dr. Burdon-Sanderson (Lecture IV, on the *Infective Process of Disease*), "I mean to designate the doctrine, that, when a contagious disease is communicated by the atmosphere, by personal intercourse or

in any other way, conveyance takes place by specifically endowed organisms, which stand in a similar relation to the disease to that in which the seed does to the plant. For, just as the seed is at once the origin and the offspring of the plant, so, according to this view, the morbid germ produces the disease, and is in its turn produced by it. This being understood, it is evident that the term *contagium vivum* relates exclusively to specific diseases."

The accurate demonstration of this theory requires proof—First. That certain living forms, peculiar to each individual disease, exist in the body in connection with such disease. Secondly. That by the inoculation of a healthy person, with blood, or other matter containing these forms, the same disease will be reproduced. . Thirdly. That these forms do not ordinarily exist in the healthy individual. Let us first consider (a) the diseases which are supposed to fulfill *all* the above conditions; next (b), those which partly fulfill them; and finally, discuss the status of *contagium vivum* as regards similar diseases, concerning which no proofs have, as yet, been collected.

(a) According to the researches of Davaine, Koch, Cohn and others, the specific disease known as *splenic fever*, so fatal to some of our domestic animals, and which is also transmissible to man, is caused by a specific organism, the *bacillus anthracis*. These bacilli may, during the disease, be seen in the blood by the thousand; if the animal does not die, they gradually disappear. This organism is scarcely distinguishable, morphologically, from the *bacillus subtilis* which occurs in hay infusion. It is thus described by Dr. Koch: "The *bacillus anthracis* consists of a fine, delicate rod, possessing no motion. Under favorable conditions, it grows into long leptothrix-like filaments. Highly refractive spores make their appearance, which soon become free; these spores measure from $\frac{1}{5000}$ to $\frac{2}{5000}$ of an inch in diameter." The blood in splenic fever is dark in color, laky, and non-coagulable. Experiments have not only been constantly successful in reproducing the disease by injection of the blood containing the *bacilli* in the tissues of healthy animals; but what is still more conclusive, they have been cultivated through

several generations, and have then caused splenic fever after injection.

In February, 1878, Dr. Klein, of London, read a paper before the Royal Society, in which he presented the following statements: The disease known as pig-typhoid, hog-cholera, red-soldier, etc., and which, from a study of its pathology, he proposes to call pneumo-enteritis of the pig, is caused by a specifically endowed organic form, which is met with in the peritoneal exudations, and rarely in the blood of animals suffering with the above disease. Having discovered this organism (a new species of bacillus), he instituted the following experiments: 1st. He made six successful inoculations, by injecting in healthy animals a small quantity of peritoneal exudation. 2d. He also injected matter, solid and fluid from the lungs and different parts of the intestine, with the invariable result of producing the disease. 3d. With a minute quantity of fluid peritoneal exudation, which he had kept hermetically sealed for twenty-four hours, he fertilized a drop of aqueous humor of a healthy rabbit. This he isolated and kept at a temperature of 32° C. for twenty-four hours, when an atom of it was used to inoculate a second drop of aqueous humor, which was then treated like the first. This he calls the second generation. A portion of this was used to start a third generation; then a 4th, 5th, 6th, 7th and 8th generation was produced. With a bit of the last, he inoculated three healthy animals. These, after the regular incubation period, had "pig-typhoid." A microscopic examination of these "cultivated fluids" showed invariably the species of *bacilli* which he had discovered in the animals suffering from "pig-typhoid." The appearance of the bacillus of pig-typhoid is very similar to that of the *bacillus anthracis*. It has, however, these distinguishing characteristics: It possesses power of motion during a certain stage of its existence, and its spores are much smaller and more cylindrical. In July, 1877, M. Pasteur had published similar observations regarding the cattle disease known as *charbon*, which he showed to be dependent upon a special bacterium.

In 1863, Dr. Lionel Beale published the discovery of cer-

tain minute shining bodies (micrococci) in vaccine lymph. In these he supposed resided the contagious or active element of the lymph. In 1868, Chaureau succeeded in physically separating these micrococci from the serum of the lymph, and experimentally proved that, without them, the vaccinal serum is not contagious; and further, that the activity of vaccine lay entirely in the elementary organisms. The latter, according to Burdon-Sanderson, are highly refractive micrococci about $\frac{1}{20000}$ of an inch in diameter, and appear under the microscope collected in groups of three or four.

Dr. Braidwood and Mr. Vacher (*Contributions to the Life History of Contagium*), whose publications on this subject are the most recent, and whose experiments have been conducted with scientific accuracy, not only corroborate the foregoing, but state that these bodies may be seen in the cysts of hair follicles budding, and throwing off minute, highly refractive spores. They have also met with and identified these micrococci in sections of skin in patients affected with variola, germinating and throwing off spores on the fourth day after the eruption. Lastly, these bodies are not only seen in vaccine lymph, but are also observable in human and ovine variola.

(b) *Relapsing fever*.—A few years ago, Dr. Obermeier, of Berlin, published the discovery of microphytic bodies, which he describes as “mobile and filiform” in the blood of patients suffering from this disease. Confirmatory evidence has not been wanting, and the microphyte has been identified as that species of the Monadidæ, known as the *vibris spiralla* or trembling animalcule. I am not aware, however, that the disease has been experimentally propagated by these spirallæ; and if it be true that it has not, positive judgment as regards its etiology should be withheld.

The *American Journal of Medical Sciences* for January, 1868, contains an article from the pen of Prof. J. H. Salisbury, in which he declares that syphilis is due to the development in the tissues and blood of a microscopic algoid plant which he designates as the *crypta syphilitica*, and thus describes it: A homogeneous filament with extremities obtusely rounded; the filaments are of such uniform structure through-

out that no trace of transverse markings are visible, save in the early stage of their development; neither can the contents be distinguished from the outside walls of the filaments. The filaments are either straight, coiled or arranged in curves. They develop from spores which may be active or inactive in the connective tissue, and may be transplanted from one individual to another, by inoculation, or by contact with mucous membranes. They are believed to produce the disease known as syphilis. The connective tissues in their various modifications, form a fertile soil for the development and propagation of this plant. When the spores are planted on a mucous surface, they vegetate—the filaments making their way through the basement membrane instead of extending laterally in the epithelial tissues, which, in the primary disease, is only destroyed immediately over where the plants first penetrate the glue tissue beneath.

Prof. Salisbury's observations extend over a period of twenty years, and embrace his experience in more than 100 cases. He further states that, in gonorrhœa, he has detected the "crypta gonorrhœa," somewhat similar to the "crypta syphilitica." This, he says, invades, and is propagated only in mucous membranes. He reports himself as having proved the truth of this assertion in several hundred cases of gonorrhœa. "It is an interesting fact," he finally says, "that this plant is limited in its invasion to the epithelial tissue, while the crypta syphilitica confines itself mainly to the connective cartilaginous and osseous tissues. This explains, perhaps, why the latter produces constitutional derangements, while the former does not." Before accepting the foregoing, Dr. Salisbury's observations should be confirmed and extended.

Diphtheria.—The false membrane on mucous surfaces observable in this disease has been constantly found to contain micrococci and motionless bacteria. These have not yet been definitely proven to contain the virus of disease; indeed, it is generally objected to the probability of this conclusion, according to the observations of many, *that diphtheria may exist symptomatically before any false membrane appears.* This reasoning leads to the conclusion that the pseudo-membrane is merely a

symptom of the disease, "probably an exudation from the blood," some say; "or a low form of inflammation;" and as the above-mentioned organic forms are not seen in the blood, they reject them as a cause of the disease.

From a close study of the natural history of diphtheria, I am inclined to the following opinion regarding its etiology: That while the membrane is often invisible at the outset of the disease, the microphytes, which form a large part of it, exist in a film too thin to be visible to the naked eye. Every one is aware how, in a perfectly clear infusion, millions of infusoria may be discovered by the microscope; and it may be several days before a sufficient number shall have developed to make the liquid turbid to the naked eye. Now, I think, in diphtheria, the membrane is formed in the same imperceptible way as the scum which may finally be seen in the infusion. The microphytes from the atmosphere come in contact with the mucous membranes; they multiply, and finally form the pseudo-membrane peculiar to diphtheria. In the meantime, however, they have also manufactured a specific poison analogous to the "pyrogen" obtained by Burdon-Sanderson from putrilage. We have seen that "pyrogen" is manufactured by the saprophytic organisms which produce putrefaction, and that its absorption causes simple septicæmia. Now, the septic poison which is produced by the organic forms which exist in the diphtheritic membrane, is probably one of the soluble ferments, incapable, like others of its class, of reproducing itself. It is gradually absorbed into the blood, and produces the constitutional symptoms of diphtheria. From this view, it is plain that the symptoms of the disease may be manifested before the disease appears to the naked eye; also, that the microphytes produce both the membrane, and indirectly the systemic disease.

Finally, then, I believe diphtheria to be a special fermentation, differing only from the putrefactive in the following particulars: (a) Its germs are far less widely distributed; (b) The poison manufactured from its microphytes is of a special nature, and is more easily absorbed; for whereas putrefactive changes often occur at the seat of wounds without septicæmia, it is rare to observe diphtheritic membrane without some

symptoms of the constitutional disease having been manifested. The above may be taken for what it is worth. I do not declare my arguments conclusive; further experimental evidence is necessary; but I think this theory best interprets what we know of the history of the disease.

Cholera.—Much conflicting evidence exists regarding the cause of this dreaded plague. Hallier, of Jena, Klob, of Vienna, and Thorné, of Cologne, have met with certain fungi in the evacuations of cholera patients. Loesch, of St. Petersburg, also avers the existence of myriads of cercomonads. Other high authorities have failed to confirm these observations, and at the present time, no decisive opinion can be given regarding the relation of organic forms to the disease, from lack of experimental evidence with which to support it.

Some have reported the existence of organic forms in connection with *glanders* and *erysipelas*. It would be a proper subject for further observation to those having the above diseases under treatment.

Just here, let me say, that investigators who suppose that they have discovered the cause of an individual disease in some organic form, should not be satisfied with this much of a discovery, but should pursue some fixed method for its verification—*e. g.*, such as that adopted by Dr. Klein in his investigations of pig-typhoid (*and not that which he pursued in his study of human typhoid*), so that when published, the results will be of some scientific value. As it is, many not even waiting to convince themselves, thrust their suspicions into print in the form of arbitrary statements, and thus confuse and demoralize the scientific world. No analyst having suspected the discovery of a new element, would think of publishing the fact until he had exhausted every test cognizable to the science of chemistry. Let us, then, endeavor to imitate in our investigations the methods of our brethren in the exact sciences, from whom, I think, we may learn much, despite the opinion of the editor of the *Medical Press and Circular*, who objects to the germ theory for the reason that it was promulgated from the laboratories of a chemist and a physicist. After all, science is the only test of material

reality, and we physicians should never become empiric except when our scientific knowledge of the subject is insufficiently advanced to effect our ends.

Pathogenic forms have not, as yet, been found in connection with any of the other contagious diseases, but from their analogy to the diseases of which we have spoken, I think it is scarcely an unjust inference to suppose that the whole class of zymotic diseases depends upon a "contagium vivum" which we may hope at some future date to demonstrate and study.

IV. CONCLUSIONS. *En résumé*, I think the reader will see that only two courses are left him. They are the acceptance of the germ theory, and that of "contagium vivum," or a rejection of the experiments which have been cited to uphold them. Let us examine the arguments of those who prefer the latter course. "If the above theories be true," they ask, "Why do germs cease to multiply, and allow the sick man to recover? Who would get well from a disease due to self-propagating contagions? Why do these atmospheric contagia select only a small minority of the population?" In reply, let me ask if the above objections might not be made to any theory of contagious disease? In an epidemic of any disease due to external causes, is not the exemption of many as inexplicable on one hypothesis as another? In every case, it is allowed that the virus of a contagious disease reproduces itself in the body of the infected individual. Why does this reproduction cease? Before the theory of "contagium vivum" existed, it was explained that some unknown part of the human body was used up by the contagious virus, which having nothing further to act upon, ceased to reproduce itself. Have we not an equal right to say that the food of our living contagia having been eaten up, they cease to multiply, and die?

Do we not see the yeast plant and *bacillus subtilis* of hay infusion starve, having eaten up that part of the mixture on which alone they can be nourished? Furthermore, in the property of each special disease of "*breeding true*," have we not an example of biological action, inherited and transmitted by reproduction from parent forms, rather than a "catalytic"

action of dead animal matter, which the opponents of the living theory must uphold?

Chemistry does not furnish us with any such non-vitalized agent as the latter, capable of infinite reproduction under certain conditions. The so-called organic principles—ptyaline, pepsin, etc.—can indeed produce certain changes, as yet inexplicable; but the matter which is changed cannot, in its turn, reproduce these changes. Again, because we have not yet been able to detect specific forms in connection with many zymotic diseases, wholly analogous to others of their class, in which we know them to exist, we should not give up the search, and argue that the hypothesis is fallacious because of its being so far fruitless; for we should have no more ground to assert this than we have to declare that Mars is uninhabited because no telescopist has, as yet, proved the contrary. The improvement in the microscope, by means of which we might perceive the smallest divisions of matter known to exist, would surpass that of the telescope, which would allow of our demonstrating the political condition of Mars. By means of our most powerful combinations, we cannot define objects less than $\frac{1}{200,000}$ inch in diameter; and we know (see *Gaudin on Atomic Theory*) that matter exists in a state of division so fine that, when increased in size 8,000,000,000,000,000,000 (eight sextillions) times, it will still be no larger than the head of a pin. This is true as regards the unit particles of mercurial vapor, which are, as regards size, to a pea as a mustard seed to the earth.

In conclusion, I think we cannot but accept the opinion that certain diseases are caused by certain organic forms, and that it is most probable, arguing from analogy, that allied diseases owe their origin and propagation to kindred organisms, concerning whom we can as yet postulate nothing.

Railway Accidents in Great Britain.—The total number of persons whose lives were lost in connection with railways during the nine months ending September 30th, 1878, is officially stated to be 797. Besides these, there were 4,452 persons injured.—*N. Y. Med. Jour.*

ART. II.—**Chloroform and Ether—Their Physiological Action and Comparative Merits as Anæsthetics.** By W. D. BIZZEIL, M. D., Mobile, Ala. (Read before the Mobile Medical Society.)

Mr. President: I. PHYSIOLOGICAL ACTION.—We will first briefly consider the physiological action of the two substances under consideration—not attempting to give the details of experiments that have been made, but rather the results arrived at by the experimenters whose names are authority—citing, in addition, such facts as have been afforded by the clinical experience of the profession.

As you are well aware, the physiological as also the therapeutical effects of drugs depend upon the amount given, and also upon the method of administration. For example, most, if not all, of the class of stimulants, if pushed to a sufficient degree, produce narcotism; and, *vice versa*, substances usually classed as narcotics, when given in small and properly regulated doses, have proven most efficient stimulants, either to the entire organism or certain parts thereof.

That the two substances under consideration possess narcotic power, their universal use as anæsthetics is sufficient proof. In fact, they may be regarded as typical narcotics; but when used in small quantities they are very rapidly diffusible stimulants.

We will first discuss the physiological phenomena attending their use as stimulants, and afterward their narcotic or anæsthetic action. This distinction between the stimulant and narcotic effect of substances was probably never more thoroughly studied or more clearly presented than by Anstie, in his celebrated monograph on *Stimulants and Narcotics*. In order, as he says, to test the question, “Whether a perfectly non-narcotic action of sulphuric ether was obtainable?” he experimented upon himself, the results of which we will briefly summarize. Four hours after taking food, and after having brought himself into a state of perfect quiescence by sitting still for some time, he swallowed one drachm of ether suspended in four ounces of mucilage. At first, the only symptom experienced was a feeling of warmth in the epigastrium. During the first three minutes and a-half which

were occupied in swallowing the medicine, the pulse, as at the beginning of the experiment, was 74, and rather weak; at the end of this time, the pulse became decidedly fuller and stronger; and during the next sixty seconds registered 80 beats, and for the next ten minutes varied between 84 and 88. Simultaneously with the change in pulse, there was experienced a feeling of lightness and comfort, and the removal of a feeling of weariness and lassitude from which he was suffering at the time of the experiment. The feeling of bodily comfort continued unabated till he retired for the night two hours after the commencement of the experiment—the pulse being then 79. No symptoms of intoxication nor flushing of the face, numbness or tingling in any part of the body were experienced; and, on testing the urine for sugar before retiring, and at 9 A. M. and 6 P. M. the following day, not a trace of sugar was detected. On repeating the above experiment, except to increase the dose of ether to ʒiiss , there was developed decided symptoms of narcosis, pulse bounding, 104, giddiness, slight confusion of intellect, flushing of face, perspiration of brow, tingling in lips, etc. Two hours later—12.30 P. M.—the symptoms had not entirely abated; pulse, 96. Awoke at 8 A. M. next day with headache and nausea, and at 6 P. M., the urine showed decided traces of sugar. After repeating these experiments with substantially the same results, he concludes, that in his own person, ʒj of sulphuric ether is purely a stimulant, and has all the characteristics that distinguish the diffusible stimulants; but in doses of ʒiiss , in his case at least, it had the symptoms and sequelæ of partial narcosis.

Anstie also reports several cases treated by sulphuric ether where stimulants were demanded, in all of which the effects were all that could be desired. His experiments on animals give evidence of the stimulating property of small doses. The medical profession, however, for many years previous to these experimental deductions of Anstie, had practically recognized this property of sulphuric ether to restore tone and power to the nervous and circulatory systems. And as Hoffman's anodyne, and in various combinations and prescriptions, its use was extensive and common enough, without,

perhaps, any clear idea as to its action, from a physiological standpoint. Now its usefulness is equally well recognized, its method of action better understood, and its very great value in all cases where there is great depression of the vital powers undoubted, and we have constant reports of cases in which it has vindicated its claims as a rapidly diffusible stimulant, particularly when used hypodermically. The pulse, which before had almost disappeared, showing immediate improvement and reaction, which before seemed doubtful, is definitely established. To go further than this and inquire how and in what way it exerts, this stimulating power, would be to discuss the whole question of stimulants and stimulation, which is not within the scope of our essay this evening.

Does chloroform possess this same power of stimulation, when administered in properly regulated doses? We think it does, and will briefly review this question. To this subject, Dr. Anstie has likewise given that masterly attention and investigation peculiarly his own. He says: "This is a subject which has been undeservedly neglected, owing to the natural prejudice which inclines us to regard every effect produced by this agent as necessarily involving some degree of anæsthesia. It is certain, however, that the phenomena which we are now to consider are produced quite independently of any such action. These phenomena may be classed under three heads: 1. Relief of certain forms of pain. 2. Arrest of convulsive muscular movements. 3. Restoration of the natural movements in parturition, when they are deficient."

1 *Relief of Certain Forms of Pain.*—Dr. Anstie calls attention to the relief which follows the administration of chloroform, whether by inhalation or applied externally, in various neuralgic affections. When given by the former method, it either gives relief during the earliest inspirations, or not until narcosis is induced. This early effect he regards as due to its stimulant medicinal action—the quantity being too small to produce anæsthesia. When used externally, it relieves neuralgias—not by paralyzing, but acting as a powerful stimulant to the nerves and capillaries of the part. Mixed in small quantity with greasy or oily substance, and

locally applied, it acts very much in the same way as a mustard plaster—only much more rapidly.

In addition to the examples above noted by Anstie, we might call attention to the powerfully stimulating effect of pure chloroform used externally. A cloth wet with it and placed on the epigastrium, rouses the heart and sympathetic ganglia in cases of severe temporary depression, with very much the same effect, and almost with as much promptness as scalding water. Chloroform used in this way does not produce the slightest numbness or other evidence of narcotism. When we come to consider the physiological phenomena of anæsthesia as demonstrated by the experiments of Bernard and others, we will see that anæsthesia, except to the slightest degree, would be impossible under those circumstances, although a certain degree of local anæsthesia can be produced; and in cold-blooded reptilians, profound anæsthesia is produced by immersion in water containing a certain percentage of chloroform.

2. *Arrest of Certain Convulsive Movements.*—Arrest of convulsive action, Anstie maintains, is not due, in many cases at least, to the narcotic action of chloroform; for the patient not unfrequently is *restored to consciousness during the inhalation*. He has not unfrequently seen the course of an epileptic convulsion cut short by allowing the patient to inhale a very small dose of chloroform. Whereas, to push the chloroform in these cases to narcotism, would be to place the patient in a very favorable condition for the recurrence of the convulsion, and adds: "I am satisfied that it is the administration of a *small dose*, such as is quite insufficient to produce narcosis, which is best suited to this purpose."

Dr. Reynolds calls attention to the power of ammonia to arrest or ward off an impending epileptic convulsion; and Dr. Anstie mentions several cases which he had treated successfully in this way, and other cases where moderate doses of alcohol had precisely the same effect—only the action here seemed to be more prompt; and this remedy he ranks next to chloroform, when used for the above purpose.

3. *Restoration of the Natural Movements in Parturition when they are Deficient.*—On this subject, Anstie says:

“Again and again, I have seen the contractions of the uterus, which had been weak and irregular, become strong and effective, at the same time that their *painfulness was greatly diminished or removed* under the influence of minute doses of chloroform.” With all due deference to such high authority, does not his own statement concede, at least, a condition of partial narcosis, or else how could these pains, the most trying that mortals suffer, be partially or completely annulled without narcosis? That labor is hastened in many cases, and that the true principle which should guide us in the administration of anæsthetics during labor, is to stop short of producing complete anæsthesia—unless, of course, instrumental delivery, or other good reasons demand it—there can be no doubt. This we believe to be well understood and adhered to by the medical profession of to-day. We will speak of this again in the discussion of the second division of our subject—but we will say, *en passant*, that the tendency of obstetricians is to greater caution in the use of anæsthetics now than formerly.

In this connection, we might mention the brilliant results which sometimes follow the injection of pure chloroform deep into the sheath of the nerve in that obstinate disease, sciatica. Here the effect is no doubt due to the nutritive changes effected by the powerful local stimulation. Such seems to me the most rational conclusion, though I have never seen it advanced.

II. RELATIVE ANÆSTHETIC EFFECTS AND MERITS.—Let us next consider the anæsthesia produced by ether and chloroform, respectively, and their relative anæsthetic merits. This is a question on which the best minds in the profession have differed and still differ.

The discovery of anæsthesia, as you are well aware, is due to the genius of the American medical mind. This has never been seriously doubted or disputed anywhere—the only question at issue being that of individual priority. There is, however, at this time, not a shadow of doubt as to who made the first use of anæsthetics to annul the pain of surgical operations; or, indeed, for any purpose (if we except the inhalation of ether to relieve the pain from inspira-

tion of chlorine gas, on which Dr. Chas. T. Jackson based his claim as the discoverer of anæsthesia), though it is now known to have been used for the same purpose by Sir Humphrey Davy long before.

The first operation performed while the patient was in a state of anæsthesia, was by the late Dr. Crawford W. Long, of Athens, Ga., March 30th, 1842. Being a country practitioner, remote from the great medical centres, with that diffidence and reluctance to go into print, characteristic of so many Southern physicians, his claims have not received that recognition at the hands of the profession that was due him. Thanks to another Southern physician of renown, Dr. J. Marion Sims,* his claims have at last been placed before the profession so clearly that there can be no doubt. He anticipated Wells' anæsthesia from nitrous oxide gas, 1844, by two years; and Morton's anæsthesia by sulphuric ether, 1846, by four years. It will thus be seen that of the two agents under discussion, ether was the first used by the profession for the purpose indicated. It was not until 1848 that Sir James Simpson demonstrated to the profession the anæsthetic properties of chloroform.

It was America and American medical men who gave to the world the boon of anæsthesia in its practical application; but I regret to say that the study of the physiological problems connected with anæsthesia, have been almost entirely neglected by the profession in this country, and we are dependent almost entirely upon the investigators of the Old World.

We will direct our inquiries first to the question, How the anæsthetic enters the organism, and through what channels it travels to reach the unique seat or seats of anæsthesia?

It had, almost from the first, been asserted that anæsthetics acted only after reaching the circulation; and Bernard affirmed only after reaching the arterial system and the great nervous centres. Almost the last work he did was to verify, by fresh experiments, the doctrines he had long maintained. He first tested the value of the various methods of absorp-

* *Virginia Medical Monthly*, May, 1877.

tion, of which he employed three—inhalation, immersion and subcutaneous injection. The two latter methods he found inadequate to produce anæsthesia, save in cold-blooded amphibia. It seems he did not try injections into the pleural or peritoneal sac, as had been successfully practised by Anstie. If chloroform, the substance made use of by him, was injected pure, it created so much irritation at the point of injection, that it was only very imperfectly absorbed; in other words, it acted only as a powerful local stimulant. When diluted, it was eliminated so rapidly in its passage through the lungs as to produce no effect whatever. The respiratory function of reptiles not being so actively performed, anæsthesia can be produced in them both by immersion and injection. Dr. Weir Mitchell,* however, reports anæsthesia in pigeons after injecting chloroform. Bernard, to prove the presence of chloroform in the blood of the anæsthetized animal, submitted a specimen to distillation; the distillate vapors were heated to redness, and tested by nitrate of silver. On the application of red heat, chloroform is decomposed into muriatic acid and water; and on adding the test, we have the characteristic deposit of chloride of silver. By this method, he demonstrated the presence of chloroform in the blood during the whole period of anæsthesia; but it was only when a certain state of saturation had been reached that the characteristic effects of anæsthesia were produced, which cease before all the chloroform is eliminated, but after it has become insufficient in quantity.

To prove that anæsthesia is general when the circulation is free, but limited to any portion of the body containing a segment of the central nervous organs, when the circulation has been interrupted, before the point of the absorption of the anæsthetic, he had recourse to the following experiment: Two frogs were plunged into two vases, each containing a half per cent. solution of chloroform, and covered by a rubber membrane. Through a hole in the centre of each membrane, the body of the frog was thrust as far as the middle—the retraction of the membrane holding him in place. In one case, the upper, and in the other case, the lower half

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of the body was immersed in the fluid. In both cases, after a few minutes the entire body was anæsthetized. If, however, the aorta be tied, or all the soft parts beneath the lumbar nerves be constricted so as to arrest circulation in the posterior half of the body, the effect is different. If the anterior half of the body be now immersed, the entire body is soon anæsthetized; but if the posterior half is immersed, the anæsthesia is limited to the part in immediate contact with the solution. In the first case, the anæsthesia of the anterior segment of the spinal cord is extended to the sensitive nerves given off from the posterior segment continuous with it. In the second case, the anæsthetic effect was produced on the peripheral extremities of the nerves, and was unable to travel back toward the spinal cord; and, in the absence of circulation, could not be generalized. To still further test the matter, he had recourse to the following experiment: He divided the spinal cord of a frog just below the upper extremities—the circulation of the animal being uninterrupted. On immersing either the upper or lower half of his body, precisely the same effect was produced as if the cord was intact, viz., anæsthesia of the entire body.

From these experiments, Bernard concludes—1st. "That chloroform acts characteristically when carried by the blood to the nerve-centres, but not when brought in contact with the periphery of sensitive nerves." 2d. "That any segment of the spinal cord, though completely isolated, may be affected by chloroform, provided the blood has free access to it."

In the experiments made by Anstie, after the injection of ether into the peritoneal cavity, the same conclusions are verified, though by an entirely different method. The anæsthetic was undoubtedly absorbed by the portal vein, and thence carried to the lungs. If the amount injected at any one time was sufficiently large, the amount taken up by the portal vein was correspondingly large, and narcotic effects were developed with sufficient promptness; and if the quantity was sufficiently large, death followed as promptly as after inhalation. That this was the route along which the ether travelled to reach the nervous centres, he proved by causing the expired air to travel through a test solution composed of

one part of bichromate of potash in 300 parts of strong sulphuric acid—the presence of ether in the expired air causing a deposit of the green oxide of chromium. By experiments XI and XIII on the same rat, which are classical in their completeness, he shows that a considerable portion of the ether is eliminated by the lungs, and the characteristic effects of the narcotic thus modified. He first injected into the peritoneum of a rat sixty minims of ether in divided doses, and at varying intervals; result only partial narcosis. Afterwards, when recovery was complete, a dose of fifty minims injected at one sitting was followed by death.

Commenting on these experiments, Austie says: “In the former case, the ether being administered in divided doses of gradually increasing size, but little of the first doses reached the nervous system—the greater part being eliminated from the lungs as fast as it entered the portal circulation: while in the latter the portal circulation was suddenly charged with an amount of ether which it was impossible for the lungs to eliminate so rapidly as to prevent a poisonous dose of the narcotic entering the systemic circulation, and thus operate upon the nervous system.”

Bernard claims that it is the chemical union of the anæsthetic with the cells and sensitive elements composing the central nervous organs, by which they are temporarily deprived of their functional activity—temporarily dies—and that the phenomena of anæsthesia are produced. But death can only be produced by the suppression of one or the other of the two factors essential to life, viz., the organism or the medium in which it lives. Suppression of the organism or the nerve element would result in permanent death. The temporary death of anæsthesia must be due to the vitiation of the medium, the blood, and the consequent nutritive changes in the nervous centres. If this change, which Bernard likens to coagulation, proceeds too far, the transitory death becomes permanent, and the whole organism perishes, without the intervention of any new specifically toxic action of the anæsthetizing agent.

The question, Whether there is any change in the color or characteristics of the blood, the amount of oxygen contained

therein, &c., has been studied by various experimenters; and, according to some, the blood was said to retain its normal color. Other observers claimed that it became black in the veins, and of a much darker hue in the arteries than normal. Hence, some supposed that anæsthesia was a state of asphyxia. Professor Paul Bert, of Paris (since more widely known for his experiments in connection with compressed air and its effects on the animal organism), has recorded more exact observations. During the so-called stage of excitement, when violent movements occur, the venous blood becomes black; and if this condition lasts long—especially if the respiration be embarrassed—the arterial blood becomes dark. Succeeding this stage of excitement, however, is one of resolution, during which the arterial blood becomes of a bright red, and even the venous becomes of a marked rose color. If the quantity of chloroform is gradually increased, and pushed sufficiently, the animal dies and the blood at the same is found to be again dark—death in these cases being due to asphyxia and not syncope.

Bert contrasts analyses of blood drawn during the period of chloroform resolution with that taken before the commencement of the experiment. In 100 parts, the percentage of oxygen was found to be 12.4 against 7.3 before the inhalation. He found this increase in percentage of oxygen to be a constant feature. Hence, he concluded that it is erroneous to regard uncomplicated anæsthesia as a state of asphyxia.

From all that has been said, there can be no doubt that the true seat of anæsthesia is in the nervous centres—that the anæsthetizing agent, coming in contact with these centres through the medium of the arterial circulation, produces all the phenomena of anæsthesia.

III. PHENOMENA OF ANÆSTHESIA.—Anæsthesia, particularly that following the administration of sulphuric ether, has been commonly described as consisting of a stage of excitement followed by true anæsthesia, or as the first and second stages of anæsthesia. This Anstie claims to be an improper interpretation of the facts. The first effect of the inhalation is stimulating, and the only effect is to calm the nervous perturbation, if such exist, and inspire the timid with courage and confidence.

We then have greater or less excitement of the circulatory and respiratory functions, voluble talking, and more or less struggling. Both from Anstie's sensations when experimenting on himself, and from his observation of the phenomena of excitement in others, he denies that this condition precedes anæsthesia, but affirms that it is an evidence that the nervous centres are already yielding to the lethal paralysis that will soon over-master and temporarily extinguish them. This we believe to be the true interpretation. Dr. Long says* that he was first led to his great discovery of anæsthesia by a study of the effects of ether inhaled to intoxication, practised by the young people of his neighborhood as a sort of diversion ("ether frolics," as he terms them). He observed in his own person, and in others not unfrequently, that during the excitement of intoxication, severe bruises and other injuries were received without the slightest sensation of pain.

Anstie, commenting on his experiments, concludes :

1. "In the production of ether narcosis, important differences may be noted in the order of the symptoms according to the rapidity with which the blood receives the higher degrees of saturation. The general principle asserted by Snow is vindicated by experimental fact."

2. "He proves that the same effects follow injection of liquid ether into the pleural or peritoneal cavity, provided a sufficient quantity reaches the arterial blood, as previously stated."

3. "Ether narcosis, when induced by proper administration (atmosphere *weakly* impregnated), consists of a paralysis which spreads from periphery to centre, which involves the brain, the sensory, the motor, and the sympathetic systems to nearly an equal extent—the sympathetic phenomena probably appearing slightly the earliest, and the sensory slightly preceding the motor."

4. If the process do not extend over too long a period, it tends naturally to recovery. "The too great prolongation, however, even of this, which may be called the typical form of ether narcosis, tends to produce death by paralyzing the respiratory movements through its effect on the medulla oblongata."

*See paper of Dr. J. M. Sims, *Va. Medical Monthly*, May, 1877.

5. "Under the circumstances of *very rapid* saturation of the blood with a large dose of sulphuric ether, the course of narcosis is materially disturbed, and tends to the immediate production of dangerous or even fatal symptoms, which differ from those observed when an animal gradually sinks into death by apnœa as the result of the protracted operation of less overwhelming doses."

6. "The statement made by Dr. Snow, and repeated by the Boston Medical Improvement Society, that ether is altogether incapable of causing sudden death by paralysis of the heart," Dr. Anstie thinks considerably invalidated by his experiments with strong atmospheres of ether, or injection into the peritoneum. Anstie says that it is entirely too vague to say that in the early stage of etherization the respiration and pulse are increased proportionately in frequency, and in the latter stages diminished. Not unfrequently the circulation is greatly quickened, while the number of respirations is but slightly, if at all, increased in frequency. It is a mistaken idea that so long as the heart's action is not diminished in frequency, "that organ may be said to have escaped or resisted the narcotic action of the ether." He says further: "Extreme quickness of the pulse is very well known to be a symptom of great cardiac debility; it is considered to afford this indication in the various 'adynamic fevers.' And by analogy we find this phenomenon very frequently, indeed, almost constantly, developed as a symptom of very acute anæsthetic poisoning, which is yet not quite severe enough to arrest the co-ordinated movements of the heart altogether." In many of the experiments which he has made, "great rapidity of the circulation was the not uncertain harbinger of a rapid and shock-like fall of the pulse-rate; but in all these cases it was obvious that the rapidity, as well as the subsequent slowness, were the direct consequences of a paralysis of those portions of the nervous system which regulate the heart's action." "It is, therefore, erroneous to speak of the phenomena of cardiac 'excitement' as belonging to the 'pre-anæsthetic' stage." This effect on the circulation he attributes to a partial paralysis of the sympathetic system." From the intimate connection of this system of nerves with

the arterial tree, we would expect it sooner to succumb than the medulla oblongata or pneumogastric.

Anstie then details the phenomena, and shows that this is the true explanation that should be accorded them. First, the flushing of the face and slight perspiration on the forehead, nearly always observed; next, the more or less profuse flow of saliva, and we might remark that both of these symptoms are observed to accompany the earlier stages of chloroform narcosis, and is nearly always observed just as the patient exhibits, by incoherent talking or otherwise, that he is losing his mental control.

Next, by its effects upon the circulation, "which *vary greatly* according to the rapidity with which the blood becomes impregnated with the ether." Entering the blood slowly, the increase in the pulse-rate is comparatively small, and may never attain a very high point unless pushed to a fatal result. But when a large dose is introduced suddenly into the circulation, the pulse becomes extremely hurried and greatly impaired in force, which may continue up to a moment when it will be exchanged for intermittence or complete arrest. The highest degree of paralytic action on the cardiac branches of the sympathetic, is that seen where the heart is suddenly arrested without this preliminary quickening. This catastrophe Anstie believed to be seldom, if ever, produced by ether, though it had undoubtedly followed the administration of chloroform. Ordinarily, a fatal dose of ether, rapidly absorbed, sets the heart running hurriedly before it finally stops.

The presence of sugar in the urine following the narcosis, Anstie attributes to the same cause—paralysis of the sympathetic, as also probably the hepatic filaments of the pneumogastric. He believes this artificial diabetes is an evidence of perverted or imperfect functional activity of the liver. This is directly opposed to the views of Bernard, who maintains that the temporary diabetes following anæsthesia is due to the stimulation and excitement to the proper secretion of the liver; that it is simply an increase of the ordinary glycogenic function of that organ; that it is "no part of the anæsthetic effects of that agent." Dr. Harley offers the ingenious sug-

gestion that the filaments of the pneumogastric are stimulated, and by conveying this stimulant impression to the medulla, causes a reflex excitement of the liver through the splanchnic. This explanation, however, seems to us the least plausible of the three. It seems that if the theory of Bernard were correct, the diabetes ought to be developed either in the urine secreted during the period of narcosis, or that passed soon afterward; but Anstie says that after the most careful experiments, he has found no trace of sugar until many hours have elapsed. Animals that had been narcotized for an hour or two, and in which the narcosis had been finally pushed till death ensued, showed not a trace of sugar in the urine passed before death, or in that abstracted from the bladder after death.

Commenting on these observations, Anstie says: "Upon the theory that diabetes results from a withdrawal of the nervous influence which would ordinarily prevent the liver from forming a sufficient quantity of sugar to overcharge the circulation and cause the elimination of that substance by the kidneys, the process would be a gradual one; and it would be some time before the blood would contain such a quantity of saccharine matter as would necessitate elimination." He says justly that the persistence of the diabetes for hours, and often for several days after apparent recovery from the effect of the anæsthetic, is inconsistent with any notion of true stimulation of the liver.

Changes in the Pupil.—On this subject, Anstie says that in every case of inhalation he had witnessed in man, the first effect of ether was to *contract* the pupils; but if pushed to the high degree of narcosis, attended by stertorous respiration, etc., the pupils become dilated. Fatal administration to animals was attended by wide dilatation of the pupils just before death. This affection of the pupils Anstie states to be one of the earliest symptoms to occur in recovery from etherization.

This question has been studied by other investigators, and they are by no means agreed as to the effect produced. MM. Budin and Coyne,* of Paris, investigated the state of the

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pupil "(1) during anæsthesia under chloroform and chloral; (2) during the efforts at vomiting; and (3) during asphyxia." The results reached by these observers from experiment and clinical observation was, that during the so-called stage of excitement, the pupil, when it was possible to study it, was found dilated. As the anæsthesia deepens, the pupils are seen steadily to contract, though it reacts to the influence of various kinds of excitement, the pupils dilating when, from various impressions, the patient moves and groans. During the state of complete or prolonged surgical anæsthesia, the pupils were uniformly contracted and immobile, and they thought a study of the pupil would indicate whether true surgical anæsthesia was present or not, though it does not inform the surgeon in any way of the approach of danger, when the pulse, respiration and general condition are more to be relied on.

The conclusions arrived at as above were attacked by M. Schiff, of Florence, and all the results declared to be erroneous. He affirms that chloroform produces, during complete anæsthesia, dilatation and not contraction of the pupil.

All the practical consequences drawn from M. Budin's investigations were, therefore, declared to be false, and that the mode of administration adopted by the French author exposed the patient to almost certain death. This is denied by the French experimenters, who, after repeating the experiments of M. Schiff, declared that his method of administering chloroform in a bag induces asphyxic and not chloroformic anæsthesia. M. Schiff's method of experimentation is to inject chloral into a dog in quantity sufficient to produce complete anæsthesia. The pupils are then punctiform. To the same dog, he then administers chloroform in a bag, and the pupils dilate; on taking away the chloroform, the pupils again become punctiform, etc.

MM. Budin and Coyne adopt a somewhat different method—injecting chloral, 1 gramme, into a dog, it produces the punctiform pupil. When chloroform is administered in the "open air" (without the means of any recipient), the pupil remains punctiform, although the state of complete anæsthesia is maintained for more than one hour. In an-

other experiment, after producing the punctiform pupil by injection of chloral, they inserted in the trachea a canula with a stop cock, on closing which, the pupils dilated precisely as after the use of chloroform by Prof. Schiff's method.

The conclusions arrived at by these experimenters is, that the dilatation of the pupil indicates that the anæsthetic is not acting properly and ought to be temporarily suspended at least, as it is the precursor of other and more threatening symptoms, thus confirming the observations of Bernard, Anstie and others.

The blood having become charged with a sufficient quantity of the anæsthetic as already detailed, the nervous centres, one by one, succumb to its potent influence. First, the peripheral nerves show signs of paralysis—usually those of the lower extremity first, and generally their posterior surface; next, the cerebral hemispheres; then the cerebellum; then the spinal cord; and then the medulla oblongata. It is generally agreed that the sympathetic system is the last to succumb, and when it does, death—permanent and irretrievable—is the result. This is the order of events as universally believed to follow the anæsthetic administration of sulphuric ether. According to this, the narcotized animal would lose (1) the local sensibility of extreme parts, and the control of certain muscles in these parts; (2) the intellectual powers; (3) co-ordination and locomotion; (4) power of perceiving sensory impressions, even from parts quite near the spinal centres;” “(5) the power of breathing; (6) the movements of vegetative life, heart, intestines,” etc.

We say that this is the order of advance in which the anæsthetic paralyses, one after another, affects the nervous centres. This, we believe, all authorities agree is true of ether narcosis; but as to chloroform, there is not the same amount of unanimity.

We will briefly consider the question, whether there is any difference in the narcosis of chloroform and that from ether. That chloroform is possessed of far stronger lethal properties, the much smaller quantity required to produce characteristic effects, the promptness with which the nerve-centres

surrender and become paralysed under its potent influence, furnish sufficient proof. The profession is, however, divided on the question whether narcosis induced thereby follows the same orderly succession as that accorded to ether. Anstie believes with Dr. Snow that, administered carefully and properly, chloroform always paralyzes the nerve-centres in the order mentioned. The last to succumb is the sympathetic, and the heart is the "*ultimum moriens*." Yet Anstie distinctly says that the most complete and disastrous paralysis that can overtake the heart—viz., that coming on suddenly, without premonitory quickening of the pulse beat—has been known to follow the administration of chloroform. But in all such cases he claims that it was due to an improper administration of the anæsthetic; that the circulation was suddenly charged with such a large proportion of chloroform, that the narcotic effect fell upon the sympathetic with such force as to extinguish their vitality at once; that "this catastrophe may be induced at pleasure by the inhalation of atmosphere highly charged with the vapor, or by the injection of liquid chloroform into the pleura or peritoneum."

As to the resuscitation of animals plunged into this alarming state, he says: "Where the action of the heart has declined gradually *pari passu* with the respiration, by the energetic use of artificial respiration, life has been restored or resuscitated; but if the heart come to a sudden standstill, whether just before or after the cessation of respiration, no expert could save the animal.

The only death in the human species which he ever witnessed was accompanied, or immediately preceded, by the forcible ejection of the urine; and he thinks the emptying of the bladder and rectum shows the subject is very deeply narcotized.

The last part of the body to lose sensibility, according to Bernard, is the conjunctiva. Anstie was the first, we believe, to assert that the ano-genital region is equally slow in this particular, and the clinical observation of the profession has since confirmed it.

Anstie insists on the care that should be exercised to obtain a proper dilution of the chloroform vapor with atmos-

pheric air, taking the same ground insisted on by Dr. Snow; and that the amount of chloroform should not be above 3.5 per cent. To this end, he recommends the apparatus of Mr. Clover, and strongly condemns the administration by unskilled hands without such precaution.

In conclusion, he says: "It is my firm persuasion that, with proper care, chloroform may be administered to any patient who is fit to undergo the operation at all, whether there be any existing disease of heart, lungs or brain, or not." And that he had never allowed the presence of such affections to deter him from using it. This opinion, however, has not been verified by the experience of the profession, but time and again fatal results have followed its administration even by the ablest and most careful surgeons; and *post mortem* showed that some defect in one or the other of these vital organs, generally the heart, had precipitated the catastrophe.

Other more recent experimenters than Anstie maintain that this orderly method of paralysis, already detailed, by which the vegetative functions are the last to succumb, can by no means always be predicted as to chloroform; and that patients have died under the action of chloroform anæsthesia is no evidence of want of skill on the part of the operator, or the unsuitableness of the subject for anæsthesia, but to the fact that chloroform had been used at all.

Prof. Schiff,* of Florence, who has made a great number of physiological experiments on animals, during which it was desirable that they be anæsthetized, says: "We adopt ether and not chloroform, because a very extensive experience has shown that etherization, pushed to the very last stage of insensibility, is never dangerous to life so long as one maintains the act of respiration. And even if one presses the inhalation of ether yet further, so that the respiratory movements cease—or, in other words, the appearance of death is complete—life is never menaced if only at the moment of the paralysis of the thoracic walls, inhalation is interrupted, and a species of artificial respiration is immediately commenced by means of periodic compression of the thoracic parietes themselves."

**Amer. Jour. Med. Sciences*, July, 1874.

Chloroform has been preferred to ether because it acts more quickly, and its use is more agreeable to the patient, who dislikes the odor of ether. But chloroform has a paralyzing action much greater than that of ether; and in like manner, at least in man and the mammalia generally, has a special influence on the nerves of the heart and of the vessels. If chloroform is pushed so as to produce a considerable weakening of the respiratory movements, the interruption of the inhalation may, in a majority of cases, lead to the re-establishment of respiration and afterwards of sensation. But sometimes, a short time after the commencement of inhalation, the force of the circulation is so enfeebled that it no longer renews the blood in the lungs fast enough. The blood of the body no longer comes into necessary contact with the atmospheric air introduced by respiration into the lungs."

Prof. Schiff, after using ether in more than three thousand experiments upon animals without a single death, and even when natural respiratory movements ceased on account of the profound anæsthesia from this agent, by keeping up an automatic artificial respiration with a certain amount of ether mixed with the impure air, was enabled to continue and keep up the anæsthesia for hours; and after the suspension of the anæsthesia and the inhalation of pure air, the recovery of the animal was complete. Even when the etherization is most profound, the blood pressure in the vessels, as measured by the manometer, is maintained almost at the normal height; and "often, in experiments made with this view, we have seen that the moment of the cessation of automatic breathing, the circulation was still in so normal a state that the commencement of asphyxia indicated still the *asphyxic* height of vascular pressure, as measured by the manometer—that is, instead of falling before death, the pressure rose through the accumulation of carbonic acid, which, as is known, is an irritant of the vascular system, and of its nerves.

"It is otherwise with chloroform. In animals in which, under the influence of this agent, the pressure of the blood has been examined with the manometer, one finds that the

pressure is already considerably lowered before automatic respiration has ceased; and we have frequently seen the pulse disappear almost entirely in the manometer, whilst the pressure fell to 25 or 30 millimetres, and the dog still breathed spontaneously." Often he found, when the vascular pressure had gone down almost to the point of blood at rest, if the chloroform was removed and pure air substituted, it was not always possible to resuscitate the animal—even after spontaneous respiration had been established to the extent, in one case, of ten inspirations. These cases do not die from the interruption of respiration, nor from a paralysis of the heart, but from paralytic distension of the peripheral blood-vessels, by which stasis or stagnation of the circulating medium is established.

He agrees with other observers that the heart is the *ultimum moriens*, and though apparently dead, if the thoracic aorta is compressed just at the crura of the diaphragm, or even the abdominal aorta, the heart resumes its function, and may cause the blood pressure of the upper half of the body to again exhibit a considerable pressure, as recorded by the manometer. Ligation of the upper extremities had the same effect.

No doubt inversion of the body, or so-called "Nelaton method," acts in the same way by filling the heart and enabling it to act more efficiently, which, sending the blood to the brain, stimulates the nerve-centres, and the subject revives after apparent death.

Prof. Schiff thinks that chloroform ought to be banished from practice as an anæsthetic agent, except in rare cases where subjects exhibit an extraordinary resistance to the action of ether. In such cases, he would recommend that a little chloroform be mixed with the ether till the patient yields, when the anæsthesia is to be maintained by pure ether alone.

As we stated previously, the profession is not agreed as to what agent should be used for the induction of anæsthesia. Except as generalizations, we think that statistics are not to be relied on as to the number of deaths said to have occurred from the use of the respective anæsthetics. There can hardly

be a doubt, however, but that the general aggregate is against the use of chloroform, and the tendency of the profession throughout the world is to extend the use of ether and restrict that of chloroform.

The latter, however, has its champions, who do not hesitate to use it in all cases that come into their hands, and who believe that ether, when its use shall have become as general by the profession as chloroform is, or was, the mortality will be equally great. Many whose experience has been very large in the use of this agent do not hesitate to use it in cases and under circumstances which to others would seem hazardous in the extreme, as witness the case reported by Dr. J. J. Chisolm in the *Virginia Medical Monthly*, April, 1879.

To merely report the names of eminent members of the profession who use one or the other anæsthetic, would be unprofitable; to say that Bordeleben and other eminent surgeons of Germany, and throughout the continent, had abandoned the use of chloroform and adopted ether; that Keith, the ovariologist of Edinburg, had adopted and used ether exclusively for many years with great success, while the still greater Spencer Wells used neither, but preferred bi-chloride of methylene, etc., shows that the profession are not altogether satisfied with the anæsthetics we have been accustomed to use, particularly with chloroform. And we must believe that this reaction in favor of ether was not a *mere fashion*, but results from the *stern argument of facts and the inexorable logic of events*. A most remarkable paper was read before the Cork Medico-Chirurgical Association,* in which we are told that in all of this city (London) not a death had occurred from the administration of chloroform; and yet, Dr. Jones, after a careful survey of the facts, says that ether possesses all the elements of efficiency of action and far greater safety; the use of chloroform for anæsthetic purposes, "save under exceptional circumstances, is the needless assumption of a grave responsibility;" and he resolved that thereafter he would use ether exclusively in his practice. His

**Medical Responsibility in the Choice of Anæsthetics Employed, its Mode of Administration and Results in nearly Fifty Large Hospitals of the United Kingdom.* H. M. Jones, M. D., M. Ch., etc., London.

correspondence with the various large hospitals of the United Kingdom showed that ether was used exclusively in nearly one-third, chloroform or ether indifferently or mixed in a number, while somewhat more than one-third still used chloroform, and in a few instances decided preference was expressed for this agent. The result of the inquiry showed that the disposition to abandon chloroform and substitute ether was becoming widely diffused, and generally adopted by the profession throughout Great Britain.

There are two American surgeons who have advanced somewhat peculiar views—one in the use of chloroform, and the other on ether. Dr. John H. Packard* describes what he terms the first insensibility from ether, during which it is possible to incise abscess or perform other minor surgical operations without inflicting pain. He describes the method as differing in no way from the ordinary administration, except that he causes the patient to exercise his will power in some definite way—usually by holding up one of his hands. When the will power fails, and the hand drops, he immediately removes the ether, and operates. Consciousness is restored almost at once, without headache, nausea, or other disagreeable sequelæ that not unfrequently follow full anæsthesia. He says that this stage only lasts about one minute. The description, as detailed by Dr. Packard, is not very clear; but, in my opinion, it differs in no way from the ordinary anæsthesia; and the only point of value established by Dr. Packard is, that, by carefully watching, we are enabled to stop the anæsthesia just at the point when sensation is abolished, without unnecessarily saturating the blood and nerve-centres; the desired effect is accomplished with only a transitory disturbance of the bodily functions.

Dr. Lewis A. Sayre says:† “Air is the antidote to the anæsthetic, and as long as it was introduced, anæsthesia would be prevented. He therefore excludes all air not saturated with chloroform, and found that five, ten, fifteen or twenty drops thus administered, according to the age of the patient,

**Phila. Med. Times*, 1872; *Amer. Jour. Med. Sciences*, 1877.

†*Transactions of the International Medical Congress*, Philadelphia, 1876.

produced prompt anæsthesia without that muscular resistance and contortion of the body which follow its administration mixed with air." Administered in this way, if troublesome or threatening symptoms should occur, by a few artificial respiratory movements, the comparatively small quantity contained in the blood would be eliminated quickly by the lungs; whereas, with the blood and tissues saturated as they are when administered in the usual way, artificial respiration might not restore the patient if the respiratory or cardiac centres should suddenly become paralyzed. This method of administration may possess certain advantages, and in the experienced hands of Dr. Sayre might prove both safe and efficient; but there is necessarily a certain amount of asphyxia associated with the anæsthesia which, unless carefully watched, might lead to the most disastrous results.

Conclusion.—In conclusion, we are not prepared to say that either one of these anæsthetics should be used by the profession exclusively, or that chloroform should be utterly condemned and abandoned. We do maintain, however, that the surgeon who is accustomed to the use of chloroform, and prefers that agent, ought, as far as possible, to confine himself to it; and if he is accustomed to use ether, he ought, *under all circumstances, to confine himself to its use.* The great difference in the amount required to produce the characteristic effect, the difference in the symptoms which mark the advance of anæsthesia induced by one or the other of those agents, must not be lost sight of.

We think it, as a rule, a proceeding fraught with danger for a surgeon, accustomed to the methods and phenomena of etherization, to undertake the administration of chloroform, unless he has great fear of it; and if this is the case, he is apt to be over-cautious, and the result will not be satisfactory. As we say, our belief is, the profession is not yet ready to abandon chloroform in favor of ether, though the tide of professional popularity is now set in favor of the latter. When a few more years shall have passed, it will be less difficult to make up a verdict.

ART. III.—**Case of Cæsarean Section—Fatal—Remarks.** By J. T. BOUTELLE, M. D., Hampton, Va.

January 19th, 1879.—I was summoned this morning to attend a colored woman, 22 years old, who was having a difficult labor. On my arrival, I obtained the following account from her mother: The pains came on and the “waters broke” on the evening of the 17th inst. A midwife was summoned, and has been in attendance. The pains were strong, and continued until 5 o’clock this morning, when they ceased and had not returned. The patient was in pretty fair condition; pulse of good strength, rather quick. On making an examination, I found the outlet very narrow, the rami of the pubes making a very acute angle, and the tuberosities of the ischia only $2\frac{1}{2}$ inches apart. The mucous membrane of the vagina was greatly thickened, and crossed by two or three fibrous bands which projected like ridges. These bands were very firm, feeling like cartilage; the upper one nearly completed a circle, and, at first, I took it to be a rigid, partially dilated os uteri. Just above this band the vertex of the child’s head presented at the upper strait, feeling pointed and elongated. Another ridge passed longitudinally from the outlet upward on the posterior aspect of the vagina, crossing the circular ones. A large vesico-vaginal fistula existed. On inquiry, I learned that the patient had been delivered by craniotomy five or six years ago, after a labor of eight days—three physicians being present—and also that the midwife, on that occasion, had cut some portion of the vagina with scissors, before the doctors were summoned.

As the patient was having slight pains, I gave a hypodermic injection of morphinæ sulphatis, grains $\frac{1}{3}$, and returned home to get Dr. G. Wm. Semple in consultation. We saw the case together at 4 P. M. The outlet was so small, and the bands in the vagina so firm, and contracting its calibre so much, that it did not seem to us possible to extract the child otherwise than piece-meal; and, by that method, it was very probable that severe injuries would be inflicted on the mother. We considered that there was little to choose between—the risks of embryotomy and Cæsarean section. As there were but very few and feeble pains, and the patient’s strength was good, we decided to administer an opiate, and wait until the next morning. She was ordered a tablespoonful of chicken broth every half hour. *R.* Morph. sulphatis, gr. $\frac{1}{4}$, to be repeated during the night if pains recur.

January, 20th.—An exceedingly cold, windy day. I visited the patient this morning, accompanied by Drs. G. Wm.

Semple and J. H. Peek. Her condition was about the same as yesterday. On examining the abdomen with a stethoscope, I thought that I could perceive occasional motions of the child, and also a very faint fetal heart-beat. I therefore considered that the child was alive. The mother had felt no motion since yesterday noon. The house was small and poorly built, and the room in which the patient was confined was exceedingly cold—a small open fire-place being the only means of heating. A number of colored women were present, besides the girl's mother and the midwife, and they were evidently of the opinion that the child should be extracted through the natural passage, if possible. The mother had been informed that this might be impossible, and that we might have to cut into the womb. She was willing to trust to our judgment, but wished to have everything else tried first. The patient was then informed that we would try to deliver her through the vagina; but if we failed, we should have to remove it through the abdomen. She was not much affected at this intelligence, and agreed to undergo whatever we thought best.

Chloroform was then administered by Dr. Peek. With considerable difficulty, forceps were carefully introduced and applied to the head. Traction was then made, not with any expectation of delivery, but rather to see whether the head could be brought any lower. It was found to be immovable, and the forceps were removed.

After a brief consultation with Drs. Semple and Peek, who agreed with me that embryotomy would probably result in fatal injury from rupture of the vagina, I decided to perform the Cæsarean section, and did so. I made the abdominal incision in the linea alba from the umbilicus, about six inches downward. Before the incision was made in the uterus, some intestines showed themselves in the upper part of the abdominal incision; these were pushed back and kept out of the way. On completing the uterine incision, an arm protruded, which was pushed back, and, introducing my hand, I delivered the child by the feet. The placenta was attached very loosely, anteriorly near the fundus, its lower edge just reaching the upper extremity of the incision; it was easily removed. The uterus was extremely dilated, showing no tendency to contract; hæmorrhage was profuse. I put a large piece of ice in the uterus and gave a hypodermic injection of fluid extract of ergot in the thigh. For a few minutes I applied ice to the cavity of the uterus, and it contracted considerably, but not enough to close the incision, from which

blood poured furiously. I therefore passed three silk sutures through the uterine incision, bringing the edges firmly together; then, after placing a piece of ice in the vagina, compressed the uterus with my hand. Hæmorrhage then ceased, and the uterus contracted pretty firmly. But very little blood had entered the abdominal cavity. After waiting a short time, and carefully sponging the cavity of the abdomen until there were no traces of blood, I sewed up the abdominal incision, except for about an inch and a half at its lowest part; here I brought out the ends of the uterine sutures, and inserted a greased cloth tent. A compress was then laid over the wound, and this was covered with a thick layer of cotton batting, over which a bandage was passed. The patient rallied quickly from the chloroform; pulse feeble and rapid.

Ry. Tinct. opii.....
 Fluid ext. ergot..... $\frac{\text{an}}{\text{an}}$ 5ss
 Spts. lavend. comp..... 5ij

M. S.—To be taken at once.

In a short time after taking this, her pulse improved greatly in strength. She complained of feeling cold, but soon became comfortable after being well covered with blankets.

The child was alive when first delivered, but only breathed a few times, in spite of efforts at resuscitation. The bones of the head were quite loose, the right parietal particularly so, perhaps from injury by the forceps. After waiting an hour or more, and the patient continuing to do well, we returned home, leaving directions to give another dose of the laudanum, ergot and lavender mixture (one drachm of lavender instead of two, however) every three hours; also, to take a little milk toddy occasionally, and a teaspoonful of chicken broth every half hour.

5 P. M.—Feeling comfortable. No pain. Pulse 100—stronger than this morning. Continue treatment. As she was not inclined to sleep, I gave morph. sulph., gr. $\frac{1}{4}$ per oreum.

January 21st, 12.30 P. M.—Has very little pain, but feels a little sore about the wound. Has not vomited, and takes chicken broth and gruel. Pulse 135. The dressings were soaked with the discharges, and were changed. Wound looked well. No bleeding. Uterus contracted. Continue gruel and broth, in small quantities, frequently. Continue the prescription of yesterday every six hours.

On calling the next morning (Jan. 22) I found that she was dead. Her mother stated that she had continued to do well up to 9 o'clock yesterday evening, when she coughed a

What is a Microscope? (*μικρος*, small; *σκοπεῖν*, to view.) A tool or instrument for viewing small things.

What is a Simple Microscope? A single lens or set of lenses (bi-convex or plano-convex).

What is a Compound Microscope? One that has two or more sets of lenses, of which one combination comes next to the eye, and is called an "*eye-piece*," and another set that comes next the object, and is called an "*objective*."

What is this Clinical Microscope? A compound microscope designed for physicians' use at the bedside of the patient.

Of what parts does it consist?

The following: 1. A $\frac{1}{8}$ th objective. 2. 1-inch eye-piece. 3. Tube. 4. Cap to eye-piece. 5. Stand. 6. Stage. 7. Clips. 8. Stage screw. 9. Coarse adjustment. 10. Fine adjustment. 11. Cap of tube. Accessories, but essential: 12. Slide. 13. Cover.

What is a $\frac{1}{8}$ th-inch Objective? The set of lenses next the object that magnifies as much at ten inches distance from its face as a bi-convex lens of $\frac{1}{8}$ th inch focal distance, to wit, 50 diameters. Objectives are distinguished by nationalities, nations, systems and classes. Thus we speak of American, English, French and German objectives; also of Tolles, Spencer, Wales, Gundlach, Sewell and Leland, Smith and Beck, Habtnach, Zeiss, &c., objectives. Also,

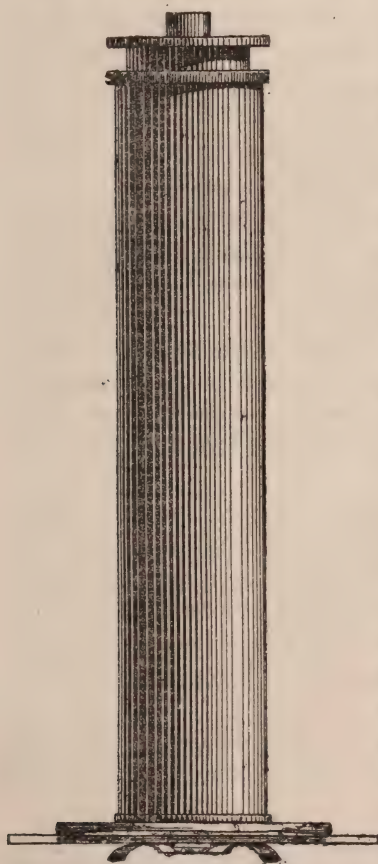


FIG. 1.

we speak of two-system, three-system, four-system objectives, according as the compound lenses are two, three, four, &c.

What classes Objectives? Varies with different makers; with Mr. Robert B. Tolles (1) angular aperture. (2) Complexity of structure. (3) Definition and resolving power.

What is Angular Aperture? The angular breadth of the pencil of light entering the objective to form the image. A great controversy has been waged on this subject, and it is not settled yet. For us, it is only necessary to say that when all the pencil of light, so to speak, enters the objective and measures 180 degrees, the "180 degrees" would be called the angular aperture; so when the angular breadth of the pencil measures 90 degrees, the angular aperture of the objective would be called "90 degrees." A first-class objective should have over 160 degrees of angular aperture, and an adjustment for cover thickness—that is, arranged so that covers of varying thickness may be used, and the objective corrected for each thickness by moving the milled ring on the objective. A graduated circle renders it possible to make a registry of the different covers used, so that by the number the proper adjustment may at once be found; also, its resolving, penetrating and defining power must be in the highest degree of perfection. (*Note.*—This varies for different objects. A first-class objective may work splendidly on one class of objects, and quite poorly on another set of objects. A first-class ocean steamer cannot be a first-class river boat.)

What is an Immersion Objective? Where the face of the objective is wet with water, glycerine, oil of cloves, &c.

What is a Dry Objective? It is one where nothing but air comes between the cover glass and the objective.

What is Balsam Angle? The angle of light coming through an object mounted in Canada balsam. First-class objectives are usually wet and immersion.

What is the Working Distance? This means the distance of the objective in focus from the object cover; sometimes it is the $\frac{1}{250}$ th of an inch.

What is a Second-Class Objective? One with cover adjustment, and less than 160 degrees of angular aperture, though it is possible to have a first-class objective of less angle.

(A third-class objective has less than 100 degrees of angu-

lar aperture, three systems of lenses, and no cover adjustment. This class of objectives is now made with clearness, flat field, resolving power and definition amply sufficient for clinical work. Such an one is furnished with this clinical microscope. On monetary considerations, it is now unwise to refrain from buying a microscope when this instrument can be bought for \$25.

This *Primer* is not written for the benefit of those to whom money for a microscope is of no account. On the contrary, it is intended for those who must make the most of the means they have at command.)

How should you Rate this Objective? American, Tolles, 3-system, 3d-class, dry, not adjustable; working distance about $\frac{5}{10}$ th inch.

What is a One-Inch Eye-Piece? It is the one found in this microscope, made of two plano-convex lenses—one next the eye, called the eye-glass, and the other is called the field-glass. When the plane surfaces are next the eye, it is called a Huygen's eye-piece. When the convex faces are towards each other, it is called a Ramsden eye-piece.

(The terms "1-inch," "2-inch," $\frac{1}{2}$ -inch," " $\frac{1}{4}$ -inch," apply loosely to the length of the combination. A 2-inch eye-piece magnifies five diameters; a 1-inch magnifies 10 diameters. So that the amplification of the clinical microscope, 50 by 10 equals 500 diameters, when the standard length of ten inches is adopted. The clinical is seven inches in length, hence its power is 350 diameters. If so ordered, the clinical can be supplied with a draw-tube; *i. e.*, a tube to slip out and into the length of the tube can be made ten inches long at the start.)

Remarks.—Having an objective and an eye-piece, one has the necessary elements of a compound microscope. Were it possible to hold in the hands the objective, the eye-piece, and the object properly, observations could be made in microscopy. But a *tube* is necessary to hold the eye-piece at one end and the objective at the other, and to cut off cross-lights, as in a spy-glass. This tube is found in all varieties of the compound microscope. In this clinical microscope, it is $5\frac{1}{2}$ inches long, and $1\frac{1}{8}$ inches in diameter. The eye-

piece fits into one end, and the objective screws into the other end. Thirty-six threads to the inch is the standard "society screw" for objectives adopted by the London Microscopical Society and most American societies; so that any objective may be used on any stand with this standard thread. In case of French and German objectives, adapters are made to fit them to the English pattern.

What is (4) Cap to Eye-Piece? A simple brass cap to cover the eye-glass of the eye-piece for protection.

What is (5) the Stand? A contrivance to hold or stand the tube on. In the present case, it consists of a thin tube surrounding the barrel of the microscope just described. It fits accurately, and should touch the collar on the eye-piece end of the barrel. At the other end it projects beyond the objective. Here is cut a female screw. Into this fits the stage screw, which is a ring slightly beveled on the inside. Into this bevel fits a ring that projects from the under side of the stage.

What is the Stage? A small platform with a central opening. In this case it is circular. Its use is to hold the object. Its diameter is $2\frac{1}{8}$ th inches; $\frac{1}{8}$ th inch of the periphery is $\frac{1}{12}$ th inch thick. The inner table is $\frac{1}{16}$ th inch thick—this allows of a space for the object.

What are the Clips? Two watch springs, free at one end and fastened at the other, with a bar having two pegs that go through holes in the stage, for the purpose of holding the slide. (Fig. 2.) These complete the clinical stand. Objectives 4-inch to $\frac{1}{50}$ th-inch Tolles have been used with this stand successfully.

What is the Coarse Adjustment? It is the focussing apparatus that moves in great (comparative) distances. In this clinical microscope it is secured by simply drawing out and in the barrel of the microscope inside of the tube of the stand.

What is the Fine Adjustment? It is the focussing obtained by turning the stage on the screw-ring in the end of the stand tube.

What are the Caps? They are two brass covers—one to protect the eye-piece, and the other the objective, when out of use. The cap of the eye-piece fits on as a tube. The other

cap has a beveled projection exactly like that of the stage. It replaces the stage for portability in the pocket.

How is the Stage Removed? By simply pulling off. Sometimes it sticks. It is then best to turn the stage screw, and bring the stage sharp against the end of the tube. The leverage of the screw will start it off. The cap is then inserted in its place. Sometimes it does not adhere, as owing to a fault of construction, the projection is not as long as that of the stage. This is the worst feature of the whole instrument. In this case, I usually put the stage in (not too tight) and turn the screw out. Then the stage is pulled off, and the cap easily fits, and may be turned close to the tube. When the cap sticks, it is removed like the stage, by sharply turning against the tube.

Remarks.—A classmate lately purchased one of these instruments. I failed to communicate how it should be used. He removed the stage screw and cap, when he wished to use the instrument. He held the object in front of the objective, and said he obtained views. This is mentioned only as a warning to others, and as a work of supererogation.

The clinical microscope, with caps on and stage off, is best kept in a chamois bag. It can then be carried in a side pocket, and the stage in the vest pocket; or it may be carried in a satchel with stage on or off.

As the clinical microscope is intended for bed-side use, it has been the aim of the writer to reduce its features to the least possible number. But something more than the instrument is needed, as a microscope without illumination is like an engine without steam.

What is the Light? It is the illumination by which objects are viewed under the microscope.

How many kinds of Light are used? Natural and artificial.

What is meant by Natural Light as suitable for the Clinical Microscope? The following: (1) Ordinary diffusal daylight in an apartment with one window (preferably). A room with more than one window may be used; but trouble comes from cross lights and too much light. (2) Sunlight reflected from a white object, as a house, a handkerchief, a garment, paper, &c. These make the best white cloud illumination I have used. (3) White cloud light.

What is Artificial Light? (1) A common coal oil or kerosine flame, such as is used all over the country. This flame used direct, gives the best light for Tolles' $\frac{1}{75}$ th inch objective (2) A wax or paraffine candle. (3) Gas light—the poorest of all illuminations.

Remarks.—The Perkins & House (of Cleveland, Ohio) lamp is the best I ever used with the clinical microscope. Mr. Tolles commends the patent mechanical lamp with a naked flame.

What is Direct Light? A light unmodified by reflection or refraction.

How is the Clinical Microscope used with the Direct Light or Reflected Sunlight? By pointing it towards the source of light.

What are some of the reasons of its favor? (1) It was in common use 200 years ago. (2) It is effective; and (3) Less troublesome than reflected light. (4) It saves time. (5) It allows of the use of the clinical microscope when the observer is placed on a lounge, in bed, in railroad cars in motion, on ship board—indeed, anywhere that a lamp will burn, and the motions are not too violent. The microscope and the eye move together. The eye-piece, objective and object move together. (6) It does away with the reflecting mirror, and thus reduces expense and motions of adjustment.

Of the Object—What is it? Anything that can be seen with the microscope. We confine our remarks to the clinical microscope for brevity. There are two classes of objects: (1) Transparent, and (2) Opaque. Only class 1 can be used with the clinical microscope. In the case of opaque objects, sections are made so that the light can penetrate through the substance, or a minute portion of an object may be obtained in any other desirable way.

What are the Essentials of an Object? (1) To be thin enough, (2) spare enough, or (3) separated enough so as to let the light permeate or penetrate. Objects of observation with the clinical microscope are easy to mount.

What is Mounting? A preparation of an object for microscopic observation, either temporary or permanent, as for a collection of objects in a cabinet. The latter is a department by itself. It consists in preserving the specimen by media,

that exclude the action of the air, and, as far as possible, interstitial changes.

What is Staining? A coloring of the object or portion of the object by reagents, for diagnosis and differentiation. This art has made wonderful progress of late. (See the systemic works.)

What besides the Clinical Microscope and the Illumination are necessary for an Observation? (1) A slide. (2) A cover. (3) Pipette. (4) A piece of old cotton or linen, and (5) The object.

What is a Slide? According to the London Microscopical Society's standard, it is a piece of clear glass $3 \times 1 \frac{1}{4}$ inches, with rounded edges; but the dimensions vary.

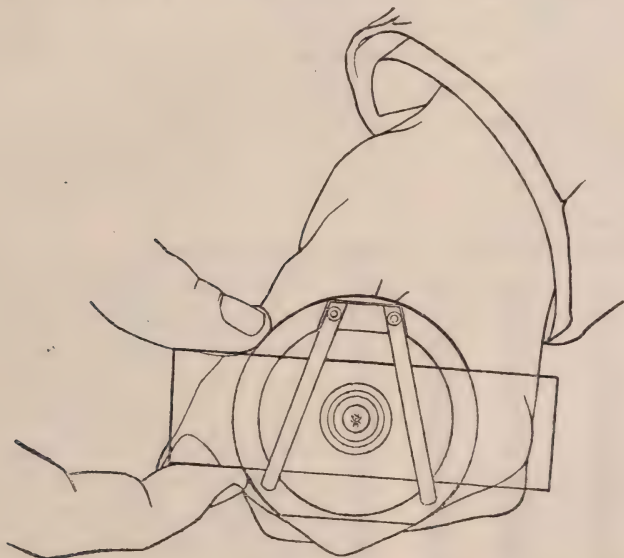


FIG. 2.

What is a Cover? Usually a square or circular piece of thin glass, less than one inch in diameter, and of a thickness varying from $\frac{1}{50}$ th to $\frac{1}{250}$ th inch. Thickness of covers for this microscope $\frac{1}{100}$ th inch.

How are Slides cleaned? Ordinarily, by washing with water, and wiping dry with an old cotton or linen handkerchief.

Covers require much care, for fear of breaking. After soaking, I have found that by moistening with water a small surface of a handkerchief, taking the cover gently in the

moistened fold, then rubbing to and fro with the thumb and forefinger, the object is best accomplished.

Dr. R. U. Piper, of Chicago, has invented a very simple device for this purpose. He takes a piece of glass plate $2 \times 3 \frac{1}{10}$ inches, and screws on it two thinner plates of glass by balsam or cement, in such a manner that a space like the letter V is formed; the length of the largest plate is the length of the V.

It is easy to see how a cover may be cleaned and any amount of pressure brought to bear on it without breakage, as it is engaged in the V and held.

To free slides from covers cemented by blood dried on, simply soak over night in cold water. A better plan is to clean the slide immediately after use.

Remarks.—For transportation and years of wear, a zinc plate box, just sufficient to receive 8 to 10 slides, I have found satisfactory. A moist cloth or paper laid in the box will keep specimens from drying. Covers may be carried in between the slides. An India rubber band will keep the box closed.

What is a Pipette? A little tube of glass (usually 6 to 10

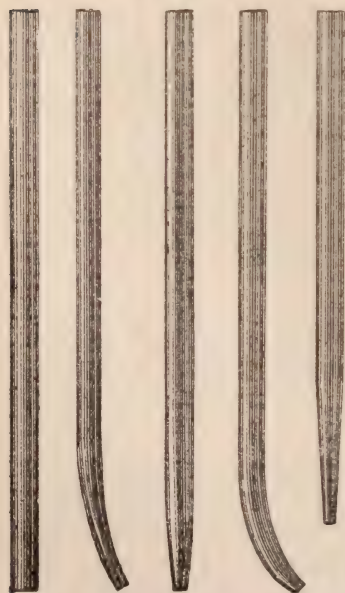


FIG. 3.

inches in length, and one-eighth inch inside diameter. (Fig. 3—Pipettes.) A No. 5 catheter serves well, and does not easily break. The pipette is used to collect deposits from urine, &c.

Office Stand of the Clinical Microscope.—An upright post of wood ten inches long by two inches square may be set in a base, and bound transversely or obliquely, so that the opening is just large enough to receive the tube of the stand, not the microscope. It may be lined with velvet. For use, the barrel with the eye-piece and objective should be removed; the tube then placed in the foramen in the

post; the barrel is replaced, and the illumination set against the objective. Fifty cents would cover the cost. Figure 4 is another device for the same purpose. Figure 5 is another form for viewing opaque objects.

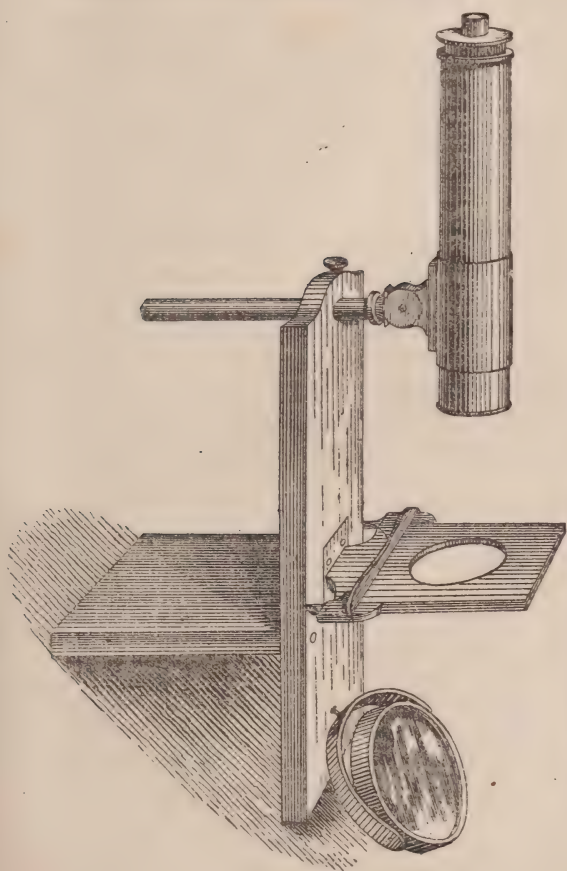


FIG. 4.

[TO BE CONTINUED.]

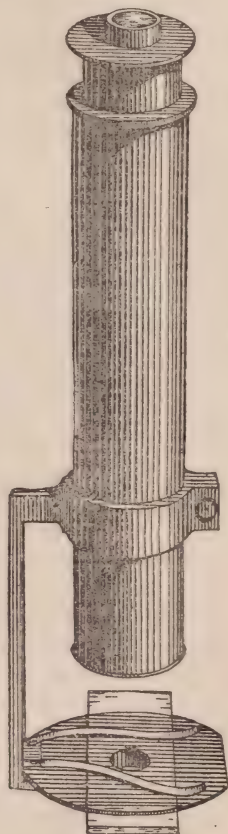


FIG. 5.

Death from Chloroform.—The *British Medical Journal*, of March 29th, reports a death from chloroform in Guy's Hospital. The patient was a woman, suffering from an abscess due to a pin which was lodged in the throat. Ether was given; but, as she took it badly, chloroform was substituted for it.

Clinical Reports.

Accidental Radical Cure of Oblique Inguinal Hernia. By
JOHN Q. WINFIELD, M. D., Broadway, Va.

Many years ago, in the beginning of my professional life, I was summoned to the bedside of a Mr. S., a farmer, about 45 or 50 years of age, to assist in relieving him of a supposed strangulated oblique inguinal hernia. Upon examination, I found a very large oval shaped tumor, extending from above Poupart's ligament down into the scrotum. It was much discolored, tense, somewhat elastic, and exceedingly tender. An old and most respectable physician, who had reached the case some hours before me, stated that every known means of reduction had been tried in vain; that further manipulation ought not to be thought of, and that an operation was imperatively demanded. He also stated that he could not be mistaken in his diagnosis—that the patient was the subject of a long standing hernia: had frequently suffered from strangulation, through neglect to wear his truss, and that upon such occasions of strangulation, the constitutional disturbance and general characteristics of the tumor were the same, except in one particular, as at present.

These views, from a physician of excellent judgment and long experience, induced me to consent to operate at once, without worrying the patient with further examination or attempts at reduction. The necessary preparations having been attended to, I made a free incision through the skin, and carefully divided the remaining coverings of the tumor down to the sack. I then pinched up the sack, and by a horizontal cut, made an opening into it, the size of a crow quill. To our amazement, a stream of serous fluid commenced flowing from the wound, and continued to flow until at least a pint was discharged, and the tumor had disappeared. The opening in the sack was now enlarged to admit a finger for exploration. No bowel or omentum was found, but a hard substance was discovered sticking in the upper part of the sack. It was easily disengaged and brought out, and proved to be a bone about one and one-quarter inches in length, several lines thick, rather smooth, somewhat curved, pointed at one extremity and blunt at the other. It was supposed to be part of a rib of some small animal. A further exploration revealed the fact that the inguinal canal had been closed by adhesive inflammation. The wound was now cared for,

and the patient recovered from it rapidly. When he quit his bed, he had no longer any use for his truss, for the bone had effected a radical cure of the hernia.

Has Chloride of Sodium Direct Toxicological Effects? Notes of a Case in Point. By E. W. ROBERTSON, M. D., Onancock, Va.

Mr. L. D. D., aged 73 years, commenced to spit blood (not hæmoptysis) 28th of *March*; and about the same time there appeared on the skin a purpuric eruption, very noticeable on the face, forehead, etc.

April 20th, 2 P. M.—I saw and interrogated his case. Ecchymoses pretty general on skin; especially marked on lower extremities, something like a bespattering of raspberry or blackberry juices over the surface. The face was pale, puffy and somewhat sallow; gums spongy and bleeding; his shirt was bloody from acts of spitting. His bowels were moved two or three times daily, and he alleged that the feces were the color of my coat (brown or logwood). He has no palpitations, but suffered from a slight attack of syncope this morning, and a feeling of weakness, and he has difficulty in getting to the "garden house." Pulse 72; tongue clean; appetite good; breathing natural; mind clear.

I saw him again *April* 22d, 6 P. M. It is stated that he had another faint yesterday morning, and he felt as though he would have another spell this morning. Pulse 76 to 80; temperature 102.5°F.; gums still exuding black blood, and they had a swollen black look, opposite the teeth, but other parts of the tongue were not so affected; extravasation not so marked on face; bowels moved yesterday, he says, but he is slightly delirious; his right eye is congested; tongue clean.

April 23d, 6½ A. M.—The family say he vomited blood about midnight and manifested paralytic symptoms on one side, and has not spoken since 2 A. M. I find him now comatose, presenting symptoms of cranial extravasation. He expired 1.45 P. M.

This gentleman has the following history: He weighed about 190 to 200 pounds (I suppose), and was of a sanguine temperament. He has been eating largely and regularly for several years, chloride of sodium. Being firm in his views, no one successfully dissuaded him from his course. He remarked, relative to the cutaneous extravasation, "the salt had driven the blood to the surface, and that he had been expecting it for years." His friends became anxious for his

welfare, urging him to seek medical aid, but he refused, asserting he was worse off for the use he had formerly made of physicians; that their mercury was yet in his system, etc.

Upon investigation, I estimated that he has averaged, since October, 1878, in addition to that added in the culinary processes, a large teaspoonful of salt daily (about grs. c.), which for a period of six months, would be about 37 troy ounces, upwards of three pounds. He would refuse butter, empty salt into his plate, and cover his cakes with the salt. Aside from this course, his diet was mostly similar to the other members of his family. He preferred, however, to have a bed room, with no fire, and would read, write, and lounge a great part of his time in seclusion, even in cool weather.

Now, does this case favor the idea of direct adynamic effects from salt? I am familiar with the theory at present received, viz., absence of the potash salts, generally existing in the winter diet, in such cases, or a kind of inanition.

I would be pleased to see something relative to the case from some able correspondent.

Congenital Absence of Phalangeal Joints, with good Use of Fingers. By A. V. CUNNINGHAM, M. D., Zelenople, Pa.

On June 18th, 1873, I was summoned to attend Mrs. S., of Zelenople, Butler county, Pa., in her fifth labor. She was apparently in good health and spirits. Labor progressed favorably, and in a short time after my arrival, a little daughter, as Prof. Meigs would say, "was brought forth from the dark sources of time and launched on a boundless ocean of eternity."

My attention was directed to the peculiar appearance of the little stranger's hands. There were no joints between the first and second phalanges of all the fingers of the left hand, and also between the phalanges of all the fingers of the right hand, except the index finger, which, with the thumbs of both hands, was natural. The little girl is now past six years of age, and seems to handle all objects with the same ease as do others of her years. I noticed, when showing the malformation to Dr. D. Cunningham, of Wurtemberg, that she could flex the last phalanx to an acute angle with the long phalanx formed by the union of the first and second phalanges, whilst other children can only flex the last phalanx to an obtuse angle. The child is well formed in every respect, except in the particular above named, which is rather unique.

Correspondence.

Priority of "Thimble Blistering"—Epidemic of Dysentery in Arkansas.

Dear Doctor,—In the July number of your journal I find a communication from Dr. Watson, of Saltville, upon the subject of Thimble Blistering. At the close of his article, he says, he is indebted to his friend, Dr. Apperson, of Smythe county, for a knowledge of the proceeding, and Dr. Apperson is not aware of how or when he came in possession of it. If he will turn to page 62, 2d volume *Trousseau's Clinical Medicine* (Lecture on Neuralgia), he will there find the procedure fully described, as well as a foot note referring to Trousseau and Bedoux's work on Therapeutics. When, under the article Ammonia, vol. I, page 392 (French edition of 1855), credit is given to Bretonneau, the distinguished physician of Tours.

We are now having in our section a very severe type of dysentery. Some of the cases fall early into a low typhoid condition, with a dry, blackish looking tongue, feeble and frequent pulse, and muttering delirium. These cases are of course difficult to manage. We have had better results from a combination of creosote and morphia in mucilage, with anodyne injections, than from any other treatment.

I am respectfully,

J. W. BREEDLOVE, M. D.

Greenwood, Ark., July 11, 1879.

Original Translations.

From the German and French. By WM. C. DABNEY, M. D.,
Charlottesville, Va.

Creosoted Glycerine in Ulcerations of the Neck of the Uterus. (By Dr. Mendersohn, *L'Alger Medical* and *Le Practicien*, June 9th, 1879.) The use of a mixture of creosote and glycerine in ulceration of the neck of the uterus was suggested to Dr. Mendersohn by the favorable results obtained from its use by Dr. Cadier in ulcerations of the larynx. He reports

thirty-seven cases in which he has used it. The mixture was composed of two grammes of pure creosote, fifty grammes of glycerine, and twenty-five grammes of alcohol. The ulcerated surfaces were pencilled with this solution every day, or every other day, with the following results:

1. Of twenty-eight cases of simple ulceration or erosion, twenty-six recovered entirely, and two were greatly benefited. The average number of days during which the patients were under treatment was twelve. In two cases where the discharge was very great, treatment was continued for thirty days. In two of the cases, other modes of treatment had been tried for a month without success. In eight of the cases, the ulceration was accompanied by metritis with profuse discharge, and these were the cases which proved most rebellious to treatment.

2. Seven cases of granular and fungus ulcerations were treated with the creosote and glycerine. Of these, six were cured, and one greatly benefited. The average number of days during which these were under treatment was seventeen. One patient was under treatment, however, for forty-four days. In this instance, the fungosites were very numerous, and there was a metritis with very abundant discharge.

3. Syphilitic ulcerations were submitted to the same treatment, which was persevered in for thirty or forty days, but without any result whatever. Iodoform was then used, and Dr. Mendersohn states that this latter has always given him excellent results.

The Internal and External Employment of Thymate of Soda and Thymic Acid.—Dr. Alvin (*Bull. Gen. de Therap. and Le Progrès Médical*, May 31st, 1879) states that, for a year past, he has been in the habit of using thymic instead of carbolic acid, whenever he wished to produce a caustic, substitutive or simple astringent action on the mucous membrane of the larynx or pharynx. Solutions of thymic acid are much better tolerated than those of carbolic acid; they are just as active, and Dr. Alvin states that they have given just as good results in his hands as preparations containing the latter drug.

The action of the two, indeed, is almost precisely similar, and the thymic acid preparations are entirely free from the disagreeable odor which makes carbolic acid so objectionable under some circumstances. He recommends the following as an astringent application:

Crystallized thymic acid..... 1 part.
Pure glycerine.....50 parts.

He also recommends pastilles of thymate of soda, each of which should contain one milligramme (about $\frac{1}{66}$ of a grain) of the drug.

Its use will be found beneficial, he says, in superficial stomatitis, irritation of the primæ viæ, and irritation of the mucous membrane of the mouth and throat caused by smoking. It has been found highly serviceable also for the relief of spasmodic cough. Chlorate of potash or borax may be combined with it with advantage. From six to ten of the pastilles should be taken daily. For internal administration, the following solution is advised :

Thymate of soda.....1 to 4 centigrammes.

Simple syrup.....60 grammes.

Water.....100 grammes.

This quantity should be taken in the twenty-four hours.

Dr. Alvin claims that this solution has invariably given him excellent results in pulmonary affections when he wished to lessen the cough or to modify the expectoration. It is especially efficacious in catarrhal bronchitis.

In naso-pharyngeal affections, it may be administered by inhalation or by irrigation. As the acid is often impure, the crystallized only should be used. Thymate of soda is a very unstable compound, and should consequently be used with caution.

Effusions of Blood in Sprains of the Knee-Joint.—A series of articles on this subject have recently appeared in *Le Progrès Médical* by Dr. Paul Segond. He arrives at the following conclusions as a result of experimental and clinical investigations on the subject (*Le Progrès Médical*, May 31st, 1879):

1. Sprains of the knee may be complicated with an intra-articular effusion of pure blood.

2. The hæmorrhage may be due either to a communication of the spongy tissue of the femur or tibia with the interior of the joint, or to a rupture of some of the small blood-vessels in the immediate vicinity of the cavity. These effusions are especially apt to occur when the crucial ligaments are torn from their points of insertion.

3. It is not true to say, with Bonnet, that exaggeration of the movements of rotation of the knee always leaves the articulation intact, and invariably causes fracture of the two bones of the leg. On the contrary, exaggerated movements of rotation is a frequent cause of sprains of the knee-joint, and produces very characteristic lesions.

4. The chief clinical features of an effusion of blood into

the knee-joint are the abundance and rapid formation of the effusion, and the slowness, often extreme, with which absorption takes place.

5. In the diagnosis of bloody effusions into the knee-joint, the abundance and the time of their formation are of almost pathognomonic value. The boggy and crepitated feeling of the swelling and early peri-articular ecchymoses, are exceptional signs; but their absence in no way invalidates the diagnosis when, after an injury, there has been an abundant and rapid effusion. Occasionally, a careful examination will show the seat of the hæmorrhage; but, as a general thing, its source can only be arrived at by exclusion.

6. In the majority of cases, articular puncture, followed immediately by immobilization and methodical compression of the inferior member, constitutes the best, and, indeed, the only satisfactory mode of treatment for bloody effusions in the joint as the result of a sprain.

Three instruments have been used for puncture of the joint—the lancet, the ordinary trocar, and Dieulafoy's aspirator. Jarjavay employed the lancet, and then made a subcutaneous section of the synovial membrane. This method, however, is no longer employed, and preference should be given to puncture by either the ordinary trocar or the aspirator. M. Broca used an ordinary trocar, $1\frac{1}{2}$ mm. in diameter, and 6 cm. long. Labbé and Terrillon prefer Dieulafoy's aspirator. The latter is generally conceded to be the best. The superior and internal cul-de-sac is the best point for puncture, and care should be taken not to injure the cartilages.

[The withdrawal of blood with the aspirator is no easy task, even when a large needle is employed. In a case of copious hæmorrhage into the bladder, seen some years ago with Drs. J. S. Davis and W. C. N. Randolph, we found it impossible to withdraw the blood even with a large needle, and it was not discharged till the urine become alkaline, and the clot was broken up thereby.—W. C. D.]

Chloral Hydrate in Dysentery.—Curci states (*Rundschau*, May, 1879) that he first used chloral for the diarrhœa of typhoid fever, and the results were so favorable that he subsequently used it during an epidemic of dysentery in seventeen cases. The results in all were very satisfactory. At first, he gave the medicine in combination with chlorate of potash, but subsequently he gave it alone, using as a vehicle tolerably thick barley water. It was given both by the mouth and enema. When given by the mouth, the dose was

from one to three grammes a day: as an enema, one gramme of chloral was dissolved in two hundred grammes of barley water. When given by the mouth, Curci advises that a mild purgative be given first in order to prepare the bowels for the action of the medicine.

It acts not only as a soporific, for which purpose it was first recommended in this disease by Dr. Prince, but also as a sedative, astringent, antispasmodic and antiseptic. It acts locally also as a coagulant. If it only lessened the pain by producing sleep it would be anything but a desirable remedy, as the disease would be progressing while the patient and physician were lulled into a false security. It has a very decided action, however, aside from this through its action on the cerebro-spinal nervous system as well as on the sympathetic, the nerves being very much affected in dysentery. The discharge will be lessened, and the formation of flatus, a source of so much pain in this disease, prevented.

With reference to the local action of chloral, he thinks that a part is absorbed in the intestinal canal, and a part is carried on by the peristaltic movements into the large intestine. After two or three grammes have been taken (in some mucilaginous vehicle), there is first an increase in the peristaltic movements of the intestines, which is followed by diminution in the sensibility and in the movements of the breasts. This effect is due to the action on the sympathetic, there being first an excitation and then a paralysis produced. In this way, the chloral lessens both the pain and the discharge. It acts furthermore by coagulating the albumen, destroying the poison [?] of the disease and promoting the healing process.

In conclusion, the writer reviews the action of other drugs hitherto used in dysentery, and advances some rather startling views. He thinks that purgatives given in the early stages of the disease are the only medicines comparable in value to chloral. He condemns in emphatic terms antiphlogistic remedies, as well as the use of opiates and astringents. Ipecac, he thinks, is also useless unless given in emetic doses, and is of doubtful efficacy even then.

Laryngeal Chorea.—A most interesting article on this subject, by Prof. Schrötler, of Vienna, was published in the *Allg. Wein. Med. Zeitung*, No. 7, 1879. The affection, as described by Schrötler and others who had written on the subject previously, presents a very striking and complex group of symptoms exceedingly annoying and trying not only to the patient but to those around.

The prominent symptoms of the disease is a cough over which the patient has no control, and which is totally different from that observed in other affections of the air-passages.

The cough may be either of a barking, howling ("heulendem") or crowing character. In certain cases of hysteria, such a cough may occur, and it is occasionally simulated, but in many cases it cannot be traced to either of these causes. Bell observed, in a girl fifteen years old, a convulsive, barking cough, which occurred ten times per minute, and disappeared during sleep. It did not lead to any disease of the larynx. The disease lasted four weeks, and relapsed three times.

Romberg describes, under convulsive affections of the "nerves of voice," an abnormal tone of voice, which he thought was due to an "hysterical or epileptic condition." He reports the case of a young woman, nineteen years old, who made a sound "like a saw-mill," and so loud that it could be heard on the steps outside of the house. He also mentions the case of a physician, sixty years old, who, in consequence of a complicated nervous affection, had occasional attacks of loud, bellowing coughing. A singular feature in this case was, that soothing influences, and especially music, had the power of preventing the paroxysms and lessening their violence.

Mandl described similar affections. More recently, Türeh describes similar cases under the heading of "convulsive coughs," but Schrötler thinks it doubtful whether they were due, as Türeh supposed, to disturbances of innervation about the larynx. In these cases, irresistible paroxysms of coughing occurred, which were of short duration, and of a peculiar barking character. The larynx, trachea and bronchi were perfectly healthy. Türeh reports five cases—four of which presented precisely the symptoms of those observed by Schrötler. Massei has reported three cases which he thought due to hyperæsthesia. His patients were aged, respectively, 24, 14 and 18 years, and they presented very slight or no laryngeal disease which could be detected. He considers the affection often incurable. Geissler reports the case of a boy, twelve years old, who, after taking cold, had the characteristic cough, which was brought on whenever he attempted to pronounce words or syllables commencing with the letter H. Subsequently he suffered with general convulsions, with hallucinations and subsequent coma, attacks of which could be brought on by pressure or pinching of certain

points. Prof. Wagner, in Leipsic, thought the affection in this case a form of hysteria. Dr. Spamer, in Giessen, has reported a case of the peculiar cough occurring in a child a year and a half old after an attack of general chorea. Schrötler himself has had eleven cases. They were all young persons, generally from eight to fourteen years of age, in whom, without known exciting cause or any other disease, attacks of coughing frequently occurred. The attacks came on every five or ten minutes when the patient was awake, and disappeared during sleep. He proposes to call the affection *laryngeal chorea—chorea*, because the spasmodic contraction of certain muscles or groups of muscles occurs during the waking movements of the patient and disappear during sleep; furthermore, the patient has no control over the attacks. *Laryngeal chorea* because the most prominent symptoms have their seat in the larynx. Other groups of muscles in no way connected with phonation and respiration, are occasionally affected. That the affection is a form of chorea is rendered further probable by the mimicry (*nachahmung*), the relapses, the course of the disease, and the occurrence of other nervous affections in the same individual, or in members of the family.

Of the eleven cases seen by Schrötler, there were three boys and eight girls—one of the latter being twenty-one years old. All were of delicate constitution; two were anæmic. In some, there was a very slight catarrh of the larynx or trachea present; in others, this was absent.

Schrötler thinks the affection a motor-neurosis in the strictest sense of the term; but whether it has its origin in the central nervous system, he considers a matter of speculation only. The prognosis is favorable—all of his cases having recovered in from three to six weeks. Relapses occurred, but they were always less severe than the original disease.

The treatment consisted in cold shower baths two or three times a day, the administration of quinine in large doses, and the application of the constant current. Iron was given to the anæmic patients.

From Spanish and French. By CHAS. R. CULLEN, M. D. (P. O., Richmond, Va.), Hanover county, Va.

Chloral for the Retention of Urine.—Dr. Lidd prescribed ten grammes (nearly ℥viij) to be dissolved in sixty grammes

(nearly fʒij) of water. Of this solution, he ordered a table-spoonful to be given every hour. After the patient became profoundly asleep, she unconsciously passed a large quantity of urine, and afterwards she gave birth to a living child.

Camphor as a Hypnotic.—Witch has reported in the *Italian Medical Gazette*, of Venice, many cases in which camphor acted as a hypnotic better than opium in any form, chloral, potassium, bromide, etc. The patients had certain forms of mania, or were the subjects of hysterical or hypochondriacal affections. He administers the camphor (dissolved in olive oil) hypodermically. The hypnotic effect is rapid, and the sleep is profound for several hours.

Salt-Water Washes for Fistulæ and Sores.—It is claimed that, by the action of salt water injected into fistulæ, or used as a constant dressing for sores, the wound is better cleansed than with warm water, and the surfaces commence healing more readily; they also exhibit a more natural color. The tongue shows the improvement by the removal of its creamy coat, and the appetite returns, thirst is assuaged, and diarrhœa is checked. Indeed, all the functions of the body soon return to their natural state.

Beedles (Cantharides) for Hydrophobia.—Dr. David Spilemburg, of Atta, Hungary, reports that the drugs used by the Arabs for the cure of hydrophobia are two species of the beetle, which have vesicles containing very active therapeutic principles. If the contents of these vesicles are used within twenty days after the bite by the rabid dog, it is said cures almost invariably result. These insects (beedles) belong to the family of cantharides. A work, written by a Dr. Galippe, reports that several physicians within his knowledge prescribe the remedy; and the Arabians, almost unanimously, report favorably as to its effect. The Hungarians also use this same remedy for hydrophobia, and also for another disease which evidently bears some relation to hydrophobia, and characterized by the following prominent symptoms: The patient complains of a hot, burning head; soon afterwards, the same sensation extends over the whole body, and this is followed by considerable swelling of the parts involved. Unless relief is obtained, the person dies in four days. In the treatment of this affection, administer ten cantharides (pulverized) at one dose. This brings on profuse sweating and copious discharges of colorless urine. European practitioners have not yet seemed inclined to try this remedy for hydrophobia; but the Hungarians consider the feet of the insects as the antidote to the poison of their bodies.

Large Doses of Chlorate of Potash Specific for Diphtheria. Dr. Seeligmuller supposes he has found a specific for diphtheria in a saturated solution of chlorate of potash. For an adult, the dose is a tablespoonful every hour or two; of course smaller doses for children. Very rarely does he find it required to use any other remedy. But if the patient is very feeble, he gives quinine, wine, strong coffee, tea or beef tea. (The beef tea of the English hospitals is prepared by adding boiling water in the proportion of double the weight of the amount of beef used.)

Salicylate of Soda in Diabetes.—Drs. Ebstein and Muller Warner give large doses of salicylate of soda in cases of diabetes mellitus. In a short while, the sugar, according to their statement, disappears from the urine. In moderate doses from nine to ten grammes (about seven to eight scruples), the influence of the drug upon the glycosuria is scarcely apparent; but when from fourteen to fifteen grammes are given, the therapeutic action above indicated become decided.

Poisonous Colors.—The Governor's Council, of Zurich, has prohibited the use of lead, arsenic, copper, chrome, zinc, antimony, bismuth and mercury for coloring articles of consumption, or for coloring paper in which articles of food are wrapped. Aniline dyes are also prohibited in coloring clothing, etc.

Proceedings of Societies.

Richmond Academy of Medicine.

May 20, 1879. Tape Worm Expelled.—Dr. L. B. Edwards, in regard to the case of tape worm to which he has several times referred during the past three years, reported that he has finally expelled the head, and presumably cured his patient by means of *fresh* male fern oil emulsion as prepared by Dr. A. J. Inloes, of Binghampton, N. Y. On various occasions, he has used full doses of oil of male fern, pomegranate root, koso, turpentine, pumpkin seed, strychnia, etc. None of the agents previously used apparently did good except Dundas Dick & Co's capsules of male fern and camella: but this latter preparation never dislodged the head of the worm. A couple of doses only of Dr. Inloes' emulsion were given, when the head was promptly and entirely removed: [and from the date of the report until the issue of this num-

ber of the *Monthly*, the patient's health has been restored without any sign of return of the symptoms.]

The Conditions of Amphoric Respiration and Amphoric Echo. The President, Dr. M. L. James, presented a pathological specimen of a lung, which, in life, had afforded a very marked *amphoric respiration*, occupying nearly one entire pleural cavity. The lung showed a very large phthisical vomica, with a smooth internal surface—the front wall being made of a much thickened pleural membrane closely adherent to the parietal walls, as was nearly the whole extent of the pleural membrane on that side, the result of pre-existing inflammation. The rear wall was composed of a like adherent pleural membrane with about an inch thickness of lung, which had lost its characteristic pulmonary structure, and was left in a *carinated* condition. Dr. James expressed his conviction that such adhesion of the pleural surface covering a cavity with the chest wall is the usual condition by which amphoric respiration is produced, and has been surprised to see no mention made by the authorities of such a condition as the occasion of this phenomena. The authorities do recognize the existence of a large cavity with firm walls on the occasion of the production of amphoric respiration, but he has nowhere seen any account where pleural adhesion has been the circumstance by which those walls were thus made firm. He believes that such adhesion is the usual mode.

Dr. James also reported a case of *amphoric echo* which had occurred in a case of empyema, in which a free opening had been made through the chest-wall to evacuate the pus, which opening allowed the free ingress of air into the pleural cavity—the echo not existing before that aperture had been made. In this case, the lung being in a healthy condition, there was no communication between the pleural cavity and the bronchial tubes, but there was a marked reverberation of an amphoric quality with each act of inspiration. The quality of this sound differed slightly from that heard ordinarily in phthisical cavities, occurred at a short but appreciable interval after the inspiratory act, and was more prolonged in its utterance.

Codeia as a Sedative.—Dr. Saundby (*British Medical Journal*) says that on account of the intolerance of opium and morphia by gouty subjects, he has been led to employ codeia in grain doses, dissolved in syrup of tolu, which has succeeded beyond his expectations.—*The Practitioner*.

Analyses, Selections, &c.

Management of Retained Secundines in Abortion.—Dr. S. Baruch, of Camden, S. C., has a paper on this subject in the *Transactions of the South Carolina Medical Association*, 1879, which contains some practical suggestions. He finds that only Dr. Fordyce Barker is in entire accord with his views of treatment of such cases. As to the diagnosis of abortion during the first half of pregnancy, experience has taught him one reliable sign, which indicates that the ovum has been discharged, viz., the funnel-shaped cervix uteri. "By firm pressure, the point of the examining finger can be forced to enter the dilated cervix, and can be made to touch the spasmodically contracted internal os, which presents a sharply defined, rigid, rounded aperture. In the absence of placental remains, this is the only positive evidence of an abortion; it is a condition which neither an ordinary menorrhagia nor any other trouble but an abortion can produce."

Dr. Baruch is satisfied that all attempts to secure removal of the secundines immediately after abortion are harmful, and should be abandoned. "The celebrated Dr. Barnes says in one of his excellent lectures, that the reputation for skill in these cases attributed to him is not deserved, because he is usually called in consultation 36 to 48 hours after the abortion, when the medical attendant has given up in despair his repeated efforts at removal of the secundines. After the expiration of this period, the connection between the foreign body and the uterine tissue has been either greatly softened or entirely severed, and the removal is then a matter of comparative ease."

If hæmorrhage threatens, or if the patient cannot be under constant supervision, the tampon should be resorted to. Whether the os is contracted or presents the funnel-shape above alluded to, seal up the cervix, and render it impervious to air and fluid. Depend upon the vaginal tampon as a support for the cervical plug. Give opiates to allay pain when necessary, and ergot as a hæmostatic.

Usually on the second day after the introduction of the plug, the latter is extruded during an act of micturition or defecation, and the retained secundines are expelled with it. Occasionally the latter may hang from the os, whence they can be readily twisted off with forceps. Should the fortunate issue not follow, a vaginal injection of carbolized water is given, and another plug is introduced.

Rectal Alimentation in the Nausea and Inanition of Pregnancy—Intestinal Inhaustion an Important Factor, and the True Solution of its Efficiency—Dr. Henry F. Campbell, of Augusta, Ga., read a very useful paper on the above subject during the late session of the American Gynecological Society. The following principles may legitimately be deduced from the foregoing discussion:

1st. That the exhaustion resulting from gravid nausea not infrequently demands a supply of food over and above that which can be retained by the stomach. Death has resulted from the inanition thus produced.

2d. That the number of well-authenticated cases on record—ranging from three months to five years—fully demonstrate the adequacy of rectal alimentation to sustain nutrition unassisted by other means of ingestion.

3d. That rectal nutrition requires rather an explanation of its *rationale* than a demonstration of its truth.

4th. That water and tenuous, nutritious and medicinal solutions are probably absorbed directly into the blood, or by the portal radicles and mucous membrane of the rectum and colon for digestion in the liver.

5th. That the digestion of composite aliments is never effected in the rectum or colon, on account of the absence of the “digestive fluids” universally recognized as indispensable to their disintegration and solution. Their undissolved condition, and the absence of absorbent vessels in the rectum and colon, prevents their entrance into the blood from these portions of the alimentary canal.

6th. That the admixture artificially (Leube) of digestive principles, pancreatic juice, etc., with the injected food is not necessary or important to the efficiency of rectal nutrition.

7th. That the “vicarious secretion” (Flint) of the elements of the gastric juice, pancreatic juice, and other digestive fluids by the glandular structures of the rectum for the preparation of the rectal aliments is highly improbable, and certainly not necessary to accomplish their ultimate digestion and absorption into the blood.

8th. That the secretion of these fluids from their proper surfaces and glands (Flint), as the stomach, pancreas, liver, etc., and their descent into the rectum, may also be denied as one of the conditions to success in rectal nutrition.

9th. That the true explanation of the almost uniform efficiency of rectal alimentation and its physiology is to be found in the reversal of normal peristaltic action; first in

the rectum, sending the injected aliment above the sigmoid flexure, and then past the colon and ilio-cæcal valve into the small intestine. Here digestive fluids for their disintegration, solution and chyli-fraction are abundant, and here also lacteals abound for chylous absorption. This retrostaltic action, when continuous, as in rectal alimentation, accomplishes the ascent of the nutriment from the rectum into the small intestine. As here considered, I believe "Intestinal Inhaustion" to be a newly recognized function of the alimentary canal. It is to the intestines what deglutition is to the stomach. Through its instrumentality, rectal and buccal ingestion are as nearly as possible equalized in both their *rationalé* and their results.

10th. That the nutrition of the body by rectal aliments can be accounted for solely on the recognition of intestinal inhaustion. Without it the digestion and absorption of such solids or semi-solids as boiled eggs (Flint), meat-broths and pulps could not be explained.

11th. That the present view in regard to the movement of the contents of the alimentary canal is probably incomplete; and that aliments, whether from buccal or rectal ingestion, while undergoing digestion and absorption, are not subjected solely to a downward movement, but to alternations of progression (prostalsis) and retrogression (retrostalsis), passing and repassing the absorbent surfaces of the intestine repeatedly, till deprived of nutritive elements.

12th. That the rectal ingestion of food is a valuable substitute for gastric ingestion in all cases of disability of the upper portions of the alimentary canal.

13th. That in the early months of gestation reflected uterine irritation establishes a habit or abiding tendency to retrostaltic action in the muscular tunic of the entire alimentary canal, and that it is from this retrostaltic irritability that the nausea and vomiting of pregnancy originate.

14th. That, on account of this retrostaltic irritability, so manifest in early gestation, the intestinal inhaustion of rectal ingesta is greatly facilitated; and that this circumstance renders gravid nausea, above all others, the condition most favorable for efficient rectal alimentation.

15th. That under the careful and systematic application of rectal alimentation, artificial abortion for the relief of gravid nausea can be banished from practice, even as a last resort.

Treatment of Membranous Croup—Tracheotomy.—H. Z. Gill, A. M., M. D., of Jerseyville, Ill., presents a report on

croup in the *Transactions of the Illinois State Medical Society*, 1878, with the following conclusions relating chiefly to the treatment of the disease by tracheotomy:

1. Membranous croup is not necessarily a fatal disease, except in the epidemic form.

2. Its essential nature is, in the vast majority of cases, identical with that of diphtheria, though the means at our command, as thus far applied, are not sufficient to *demonstrate* this proposition.

3. The general treatment of diphtheria, so far as applicable to croup, gives better average results than when the latter is treated as simply an acute inflammation.

4. The treatment most generally approved and giving the best results is: (1) emetics having the properties of promptness and efficiency, without producing depression of the system, turpeth mineral and ipecac being preferred; (2) tonics and disinfectant remedies, viz., tinct. chloride of iron, and the chlorates of the alkalis, in full and frequent doses, and the same classes of remedies applied to any visible manifestation of the disease; (3) the local application of steam by inhalation, or the vapor from slacking lime, or the spray of freshly prepared lime water. Treat the fever and remissions, respectively, with veratrum and quinine.

5. Support the vital forces by an easily digested, nutritious diet.

6. Treat complications according to their general nature.

7. *Tracheotomy* is an established operation for all cases of "croup" not amenable to medical treatment, in which laryngeal stenosis is the chief, or one of the chief, elements of danger.

8. The operation should be resorted to in the latter part of the second stage, or early in the third; the earlier the operation the larger will be the per cent. of recoveries.

9. The only contra-indications to the operation are (1) generalized diphtheria, which must then be of severe degree, and be largely the cause of the predominant symptoms; and (2) clot in the heart. "It is never too late to operate while the child is not positively dead. (*Archambault.*)

10. The obligation resting on the physician to give the patient the benefit of the operation is imperative. He may not withhold it directly nor indirectly; the patient or the friends may forbid it, and thus relieve the physician.

11. The operation should be performed deliberately and carefully; exceptions, when the emergency is great, and cessation of respiration about to occur, or having occurred.

12. The trachea should be thoroughly exposed before any attempt is made to open it. Exceptions as above. Opening the trachea with a stab is a dangerous procedure. The trachea should be cleared of obstructions with the tracheotomy forceps, or with the suction tube, before the introduction of the canula.

13. The ordinary silver double canula, movable in all directions in the plate, is the best for general purposes.

14. The inner canula should be removed frequently, and both should be removed, cleaned, and the trachea cleared as often as, and whenever the emergency from obstruction demands.

15. The patient should not be left for the first forty-eight hours without an attendant competent to remove the tubes and any removable obstructions.

16. The canula should be permanently removed as soon as practicable.

17. Many patients are lost from a want of proper after-treatment.

18. Every practising physician should be prepared to perform the operation, or to have it done, whenever needed.

19. An anæsthetic should not be given if there exist sufficient asphyxia to produce appreciable anæsthesia; and whenever given, it should be done with the utmost caution.

20. A careful watch should be instituted and continued for some days or weeks, for the accidents of local or general paralysis.

Cactus Grandiflora for Cardiac Palpitations.—Dr. N. S. Davis, of Chicago, in a "Report on Drugs and Medicines to the Illinois State Medical Society," May, 1878, says:

"The reading of a paragraph in some medical publication concerning the influence of the fluid extract of the cactus grandiflora, or night-blooming cereus, over cardiac palpitations, led me to a clinical test of its medicinal virtues during the past year. The first case in which it was given was that of a female, aged about 28 years, whose nervous and digestive functions had been greatly impaired by the habitual use of morphine and alcoholic preparations. One of her most distressing symptoms while endeavoring to recover from the effects of her habit was cardiac palpitation, more especially during the early morning hours. From three to five minims of this fluid extract, given from four to six times in the twenty-four hours, afforded her great relief. Another patient was a man of good habits, but affected with chronic enlargement

of the cervical glands, and apparently also of those along the bronchial tubes, and frequent paroxysms of suddenly recurring palpitations, and with feelings of suffocation whenever attempting to take a recumbent position. He has been using the fluid extract of the cactus grandiflora about two weeks, with decided benefit in keeping the action of the heart more regular. It appears to exert a quieting influence over cardiac excitability, without any visible effect on the functions of the stomach or excretory organs. Although at present very expensive, it is certainly worthy of further investigation."

Treatment of Epithelioma of the Cervix Uteri.—Dr. J. Marion Sims contributed to the July number, 1879, of the *American Journal of Obstetrics and Diseases of Women and Children*, a paper on this subject. "The following inferences seem to be deducible from the facts set forth in this paper:

1. Do not amputate or slice off an epithelioma of the cervix uteri on a level with the vagina, whether by the *écraseur* or the electro-cautery.

2. Exsect the whole of the diseased tissue, even up to the os internum if necessary.

3. Arrest the bleeding, when necessary, with a tampon of styptic iron or alum cotton-wool.

4. Be careful not to apply the tampon with such force as to lacerate the excavated cervix uteri.

5. When the styptic tampon is removed, cauterize the granulating cavity from which the disease was exsected with chloride of zinc, bromine, sulphate of zinc, or some other manageable caustic capable of producing a slough.

6. After the removal of the caustic and the slough it produces, use carbolized warm water vaginal douches daily till cicatrization is complete.

7. After the cure, put the patient on the use of arsenic as a protection against the cancerous diathesis, and urge the importance of examination every two or three months for the purpose of detecting the recurrence of disease.

8. Then if fungus granulations or knobby protuberances not larger than a pea are found, lose no time in removing them; and treat the case afterward with caustic just as in the first instance.

9. Almost every case may be benefited by operation, even when there is no hope of giving entire relief.

Dr. Reamy, of Cincinnati, performs this operation by excision and not by amputation. We both worked out this method of operating about the same time independently of

each other, and we both published our results about the same time. I have always exsected the cervix piecemeal. But Dr. Reamy often takes it out with scissors in one solid piece, reaching quite up to the os internum.

During a visit to Koeberle in September, 1877, he informed me that he now never amputates the epitheliomatous cervix uteri; but he exsects it quite up to the os internum if necessary. He operates in the early stages of the disease, and uses Paquelin's thermo-cautère, removing a conical plug from the cervix. Dr. Wilson (*Maryland Medical Journal*, December, 1878), of Baltimore, has recently performed this operation in the same way, and he has proven that the Paquelin cautery can be successfully used in the Sims position with the Sims speculum. This is one of the most important improvements as yet made in this operation.

Mr. Spencer Wells informed me to-day (May 5, 1879), that he has successfully exsected the cervix uteri for incipient carcinoma with the Paquelin cautery. But the disease is now re-appearing.

I have no prejudices in favor of my own plan. But we can, by the sense of touch, follow up the diseased tissue and remove it all; while by the cautery there will always be a doubt whether we have done this or not. It is possible that the actual cautery may be preferable to the potential after the diseased tissue is exsected. The point that I insist on is, that the disease should be exsected and not merely amputated, whether this be done with cutting instruments or the actual cautery.

I have no experience with Prof. Schroeder's method of removing the entire cervix, nor with Prof. Freund's operation of extirpating the whole organ for epithelioma of the cervix. But the medical mind in my own country and in Germany is now so actively concentrated on this subject that it must eventually result in improved methods of treatment."

Utero-Intestinal Fistula.—A case of this rare trouble is reported by Dr. W. T. Skinner, of Glasgow, Delaware, in the *Proceedings of the Eighty-Ninth Annual Session of the Medical Society of the State of Delaware*. Mrs. L., aged 64, was attacked May 4, 1878, with acute pain with tenderness in the right iliac and hypogastric regions. In two or three days, tympanites developed; temperature 102°F.; pulse from 90 to 112; tongue heavily coated; bowels constipated; occasional vomiting. Under treatment, improvement occurred. But a well defined swelling, tender, but without fluctuation,

filled the right iliac region, and was felt above the brim of the pelvis, extending to the median line.

On *May 18*, pus and feces were discharged per vaginam, relieving the throbbing pelvic pain. For a few days the discharge was only occasional, but shortly became continuous.

On *May 22*, a digital vaginal examination felt a tumor on the right side, and the uterus fixed and displaced to the right. Per rectum, the mass nearly obliterated the canal.

On 26th, prolonged nausea and retching was followed by stercoraceous vomiting; condition critical; feces poured continuously per vaginam.

On 28th, Dr. C. M. Ellis, of Elkton, Md., in consultation. Vagina deeply injected and swollen, and holding in its folds particles of fecal matter. Os uteri projected from the right wall, was everted and swollen, and bled upon slight touch. No rent in vagina.

June 1. Vagina much less tender. Pus bathed the vagina and feces adhered to its walls. Os uteri did not bleed on touching. On raising the anterior lip of the womb with a sound, pus and feces gushed from the cavity of the womb. The swelling in the right iliac region diminished, and small quantities of fecal matter began to pass per anum after warm water enemata. The recto-vaginal septum was thickened in its upper half by inflammatory products.

June 6. Nausea returned and also stercoraceous vomiting; but became comfortable again in a few hours.

June 10. Vaginal discharges greatly diminished. Large quantities of feces pass per rectum. Much improved.

July 15. External swelling nearly disappeared; and per rectum, it was much smaller and softer; vagina normal; uterus still bound, but less firmly, to the mass on the right. Os patulous and red; upper lip soft; under lip hard and rounding. Introduction of sound was followed by a stream of pus—at first creamy white, but soon becoming bloody. Fæcal discharges per vaginam ceased, but pus had not. Patient been sitting up for two weeks. Introduced small sponge tent.

July 16, 9 A. M. Patient suffered considerable pain, of a dull aching character, in the pelvis. Upon introducing the speculum and removing the sponge tent, so large a quantity of pus at once escaped from the os as to quite overrun the vagina, greatly relieving the discomfort of the patient.

July 30. There is but little discharge now per vaginam. The tenderness and swelling have still further diminished, and the patient's general health is so far recovered that I consider her out of danger.

Utero-intestinal fistula is an extremely rare result of pelvic abscess. Simpson refers to one or two cases; Demarquay to one, as the result of protracted labor; and Ashwell reports one as the result of "abscess in the walls of the womb." After a somewhat extended inquiry, these are the only cases of which I can find any mention. The case related has some interesting clinical features. Pelvic cellulitis is usually an attendant upon the puerperal condition. This patient has not menstruated for twenty years. The woman states that at her second confinement (which was followed by two others), she had an "abscess of the womb."

It was impossible in this case to make out any causation.

The intestinal opening is, I believe, in all cases, into the small intestine, and never into the rectum; the greenish yellow color and fluid consistence of the discharges clearly determines that this fistula did not open into the rectum.

If further proof were required in support of this conclusion, I offer the following: "While I was examining with the speculum to ascertain whether there was any other opening into the vagina, except through the os, I injected into the rectum a large quantity of water, colored with cochineal, but not a drop that I could discover found its way through the fistula." The reverse of this would have been the case, had the opening been into any part of the large intestine.

Why is Battey's Operation more Dangerous than Ordinary Ovariectomy?—Dr. George J. Engelmann, of St. Louis, Mo., in the *Transactions of the American Medical Association*, 1878, says:

1. It is a more delicate and a more difficult operation, and in the majority of the cases in which it is indicated, the hand of the surgeon must work in the depth of the pelvic cavity to liberate the small gland from the grasp of the inflammatory products in which it is imbedded.

2. The pedicle cannot be fastened in the incision, barring some few exceptional cases, and that pedicle is frequently not a clear stump, but a torn and broken mass surrounded by lacerated tissue.

3. The peritoneum, in the abdominal cavity at least, is, in a healthy condition, quick to respond to the slightest insult; while in the case of ovarian tumors the constant friction and the steadily increasing compression, caused by the slow growth of the tumor, change the sensitive nature and the absorbent qualities of the peritoneum—we may say harden it—so that it is less likely to react, and will not as readily absorb septic matter.

As an earnest advocate of this young operation, *which we owe to Georgia's talented surgeon, our countryman, Robert Battey*, I have endeavored to expose freely the difficulties and dangers connected with it, deeming this a safeguard and a guide to a more successful future. Brilliant results have already been achieved by the operation, and it fairly promises, in the hands of skillful surgeons, to prove the means of relief to many a hapless sufferer.

However great the dangers, I can but again repeat "they are not out of proportion to the severity of the malady, and the magnitude of the results."

Bicarbonate of Soda as an Application for Burns.—Dr. G. L. Humphreys, of Irwin, Westmoreland Co., Pa., in the late *Transactions of the Medical Society of the State of Pennsylvania*, gives his experience with bicarbonate of soda for burns in the following language:

I have also to report four cases of burns, three occurring from an explosion of gas in a coal mine, and one from accidental contact with a stove, setting fire to the clothing of the patient, a girl of twelve. In this case the burning included the whole of the limbs and body, the only parts escaping being the feet and face. The other three were severely burned about the face and hand, and I report them to call attention to a plan of treatment advised by Dr. S. F. Walters, of the Massachusetts State Dental Society, namely, the application of bicarbonate of soda, either in a saturated solution or as a dry powder. I found it to ease pain and smarting in a few minutes, and the patients were surprised and grateful at the prompt relief afforded. The dressings were kept constantly wet with the solution. I allowed the vesicles to remain until the third day before I punctured them. I then dressed them with zinc oxidum, tinct. opii, and adeps; and having treated a number of burns, I am satisfied they healed much sooner than if the vesicles had been punctured immediately. In the severe case, the skin felt like sole leather, being burned to a crisp. She had been very restless before my arrival, requiring several persons to keep her in bed, but after the application of soda, with a roller bandage over the entire body and limbs, she became quiet and fell into a gentle sleep. Knowing the case to be hopeless, I ordered morphia sulph. in $\frac{1}{4}$ grain doses as often as required. She died fourteen hours after the accident. The application of a saturated solution of sodæ bicarb. I believe to be entirely satisfactory, as regards the relief of pain, and is certainly a much more ele-

gant dressing than the filthy oils and liniments in general use.

The Value of Absent "Tendon-Reflex" in the Diagnosis of Locomotor Ataxia.—In 1878, Westphal declared absent tendon-reflex to be a constant feature of commencing sclerosis of the posterior columns of the spinal cord. The two forms of reflex tendinous phenomena investigated by Erb and Westphal (called *knee* phenomenon, and *foot* phenomenon) were described in 1875. If the ligamentum patellæ of the loosely hanging leg, or the tendon of the quadriceps femoris of a person in health be struck a smart blow (with the side of the hand for instance), a more or less violent kick will follow; while if the tendo Achillis be struck in the same manner, the heel will be raised. In certain conditions, such as sclerosis of the lateral columns, this excitement of the tendon-reflex is so great that if the patient merely stamps his heel upon the floor, the whole limb will be agitated by spasmodic movements. In locomotor ataxia, it has been claimed that such an excitation is impossible, and that the tendon-reflex is absent in all muscles of the affected lower extremity, with the exception of the vasti interni.

In England, however, cases have been reported which are exceptional so far as Westphal's doctrine is concerned; and in a discussion of a paper read by Althaus before the British Medical Association, 1878 (*British Med. Jour.*, Aug. 31, 1878), Gowers, Sawyer and others brought forward several examples. Gowers had seen three cases in which the tendon-reflex was not absent; and in regard to the occasional absence of this tendon-reflex in health, he stated that out of 300 persons examined, several were found in whom the tendon-reflex could not be excited. Dr. Bannister, of Chicago (*Journ. Nerv. and Mental Diseases*, Oct., 1878), also reports two cases of locomotor ataxia in which the tendon-reflex was, if anything, exaggerated.

In view of these statements, Dr. Allan McLane Hamilton, of New York city, contributed reports of *eight* cases to the *Boston Medical and Surgical Journal*, December 19, 1878. The tests for the tendon-reflex were most carefully made, the skin being bared, and the force of the blows tested. The cases were unmistakably sclerosis of the posterior columns, some of them presenting changes at the fundus oculi.

Of these eight cases, four presented Westphal's symptom, while in the other four cases, the tendon-reflex was not only present, but in some instances, was markedly increased—there

being no apparent involvement of the lateral columns or any other part of the spinal cord than the posterior columns. In one case, indeed, when the ligamentum patellæ was struck ever so lightly, the movement of the foot would begin; and without fresh stimulation would continue for sometime, increasing in frequency, the intervals growing less. In this case, the triceps as well as the flexors of the forearm were easily put in motion.

But there can be no doubt of the fact that when this absence of the tendon-reflex of the ligamentum patellæ is coupled with the so-called "lightening-pains," plantar anæsthesia and dimness of vision, there is reason for apprehension.

Medical Treatment of Hæmorrhoids.—Dr. E. T. Sabal, of Jacksonville, Fla., submits to the *Medical Brief* for August, 1879, the following:

R. Iodoform.....5j.
Powder very fine in a mortar and add
Powd. opium.....grs. xv.
Pomade vaseline [or cosmoline].....5j.

Mix. Apply locally, morning and night, and after every action of the bowels, after first washing with warm or cold water.

One drachm of tannin (which is also good), may be added to the above, as suggested by Dr. J. R. Cole, of Hot Springs, Ark., to deoderize the iodoform.

Keep the bowels open by the use of the excellent formula employed by the late Prof. G. T. Elliot, of New York.

R. Magnesiæ sulphat.....
Magnesiæ carb.....
Sulphuris precipitat.....
Sacchar. lactis..... $\overline{a a}$ 5ss.
Pulv. anisi.....5ij.

Mix. Dose: One or two teaspoonfuls mixed in water at bedtime.

Vital Statistics for the next Census.—Every physician in the United States whose name and address could be obtained has been furnished by Francis A. Walker, Superintendent of the Census, with a register containing 24 pages each affording space for the record of one death. Should the number of deaths occurring within the practice of any physician exceed twenty-four; another book will be furnished on application at the census office. Each physician is, therefore, asked to preserve a record for the use of the census office of all deaths.

occurring in his practice during the year beginning June 1, 1879, and ending May 31, 1880. As it is of the highest importance to medical science and to public hygiene that the mortality statistics of the Census of 1880 shall be as complete as possible, it is to be hoped that every member of our profession will cordially co-operate with Gen. Walker in his attempt to make this information accurate and reliable.—*Cincinnati Lancet and Clinic*, July 19, 1879.

Book Notices, &c.

Publishers and Authors having complimentary copies of their publications for distribution, are invited to contribute such as they can spare to the library of the Richmond Academy of Medicine, where they will be brought to the attention of a large body of influential medical men. Dr. E. T. Robinson, Richmond, Va., Librarian, etc.

Lessons in Gynæcology. By WILLIAM GOODELL, A. M., M. D., Professor of Clinical Gynæcology in the University of Pennsylvania; Physician in-Charge of the Preston Retreat, etc. With 80 Illustrations. Philadelphia: D. G. Brinton, 1879. 8vo. Pp. 377. Cloth. Price \$3. (For sale by Messrs. West, Johnston & Co., Richmond.)

This is not a systematic treatise on diseases of women, and hence not, in the ordinary sense, a college text-book. But as a work for practitioners, it has no equal, so far as the subjects treated of are concerned. The one fault of the book is that it is not sufficiently extended in its range of subjects. But Dr. Goodell, by his great industry, accurate observations and study, and his always practical suggestions, has justly won for himself in America a name as a practical gynæcologist, second only to that of the ever illustrious Sims. Hence this book must be in the hands of every gynæcologist, as it should be thoroughly read by every practitioner. The book is well gotten up, with 80 illustrations on wood, and an index is appended.

Color-Blindness—Its Dangers and its Detection. By B. JOY JEFFRIES, A. M., M. D., Ophthalmic Surgeon Massachusetts Charitable Eye and Ear Infirmary, etc. Boston: Houghton, Osgood & Co., 1879. 8vo. Pp. 312. Cloth. Price \$2. (For sale by Messrs. West, Johnston & Co., Richmond.)

It is strange that, until this late day, we have not had a learned and exhaustive discussion of the subject of Color-Blindness. The work before us meets all the demands of

the case. It would require more space than can be given to a book notice to furnish the reader with a full and comprehensive view of the subject as treated by Dr. Jeffries. It is valuable in that it furnishes unquestionable tests by which color-blindness may be detected. In no one aspect is it more valuable than in that it may prevent disasters on railroads, and at sea, where flags of different colors are used as signals. The book supplies a large number of examples, illustrative of the importance, to life and fortune, of a normal state of vision as respects the determination of colors. The work is highly entertaining, as well as instructive, and is commended, not only to medical men, but also to business men. The book is neatly bound, and has a well colored illustrative plate, and a valuable index is appended. There are also added 18 pages of bibliographical references to the subject.

Handbook of Diagnosis and Treatment of Diseases of the Throat and Nasal Cavities. By CARL SEILER, M. D., Lecturer on Laryngoscopy at the University of Pennsylvania, etc. With 35 Illustrations. Philadelphia: Henry C. Lea, 1879. 12mo. Pp. 156. (For sale by Messrs. West, Johnston & Co., Richmond.)

This is a practical guide-book for the "successful diagnosis and treatment of diseases of the larynx and naso-pharynx," and hence is very useful. It will be found serviceable to every physician and surgeon. An advantage this book presents over others on this subject, consists in its having appended — "Tables of symptoms of diseases of the larynx and naso-pharynx," which greatly assist the practitioner in making his diagnosis. The book is most cordially commended.

Epitome of Skin Diseases, with Formulæ for Students and Practitioners. By TILBURY FOX, M. D., F. R. C. P., Physician to the Department for Skin Diseases in University College Hospital, etc., and T. C. FOX, M. B., E. A., Cantab., Physician to St. George's and St. James' Dispensary. 2nd Amer. Edition, Enlarged and Revised. Philadelphia: Henry C. Lea, 1879. 12mo. Pp. 216. (For sale by Messrs. West, Johnston & Co., Richmond.)

This edition contains about three times the amount of matter published in the first edition. Competent American authors have supervised the work as it was passing through the press, and have added most valuable notes. The classification adopted by the American Dermatological Association has also found a prominent place in this edition.

Part I gives some general observations on skin diseases, such as the proper mode of inspecting the skin, its patholog-

ical conditions, diagnostic chart, the causes, diagnosis and treatment of skin diseases. Part II gives descriptions and treatments of diseases, which are taken up in alphabetical order. Part III gives a long list of formulæ, diet table, etc. All in all, this is a most excellent book for the general practitioner.

Clinical Treatise on Diseases of the Nervous System. By M. ROSENTHAL, Professor of Diseases of the Nervous System at Vienna. With a Preface by Prof. Charcot. Translated from the Author's Revised and Enlarged Edition by L. PUTZEL, M. D., Physician to the Class for Nervous Diseases, Bellevue Hospital Out-Door Department, etc. New York: Wm. Wood & Co. 1879. 8vo. Pp. 278.

This is another volume of "Wood's Library of Standard Medical Authors." It is an excellent practical work, so far as it goes, but it is not sufficiently complete to take the place of other established text-books, such as Hamilton's or Charcot's Works on Nervous Diseases, etc. For instance, there are no distinct chapters on chorea, epilepsy, hydrophobia, etc.—indeed, on none of the convulsive disorders. The descriptions of the diseases of which he treats are, however, true to nature—the result of his carefully kept clinical records. And in the sections on treatment, he is very practical. He has a confidence in hydro-therapeutics which is not generally shared in; but we must confess to not having seen it used with the system he proposes—especially in the treatment of chronic nervous diseases.

The Pharmacopœia of the British Hospital for Diseases of the Skin. London. Edited by BALMANO SQUIRE, M. D., Senior Surgeon to the Hospital. London: J. & A. Churchill, 1879. 16mo. Pp. 80. (By mail from Author.)

This will prove a very serviceable aid to practitioners. It does not include any of the prescriptions for skin treatment already given in the British Pharmacopœia. This, then, is to be considered as an appendix to that book. Many useful formulæ for the treatment of skin diseases not elsewhere accessible are here to be found, and the conditions are stated in which the formulæ should be prescribed.

PAMPHLETS, REPRINTS, ETC., RECEIVED for which we have no room for further notice; but most of which can be obtained by enclosing a letter stamp for each pamphlet to the respective authors named.

Land Quarantine. By THOMAS LEGARE, M. D., Charleston, S. C. Pp. 2.

Philosophical Problems in Medicine. Presidential Address before the American Medical Association at Atlanta, May 6, 1879. By THEOPHILUS PARVIN, M. D., Indianapolis, Ind. Pp. 24.

What should be the Organization and Aims of the Mississippi State Medical Association? Presidential Address at its 12th Annual Session in Aberdeen, Miss., April 1st, 1879. By B. F. KITTRELL, M. D., Black Hawk, Miss. Pp. 16.

Choice of Guides in the Use of the Metric System by Physicians and Druggists. E. SEGUIN, M. D., New York, N. Y. Pp. 8.

Permanent Removal of Hair by Electrolysis. By GEO. HENRY FOX, A. M., M. D., New York, N. Y. (Read before Medical Society of State of New York, Feb. 4, 1879. Reprint from *Medical Record*, March 22, 1879.) Pp. 4.

A Case of Myxofibroma of the Auricle. By C. R. AGNEW, M. D., New York, N. Y., with a heliotype illustration. Pp. 2.

Address on the Life and Character of Lunsford Pitts Vandell, M. D., Late President elect of the Kentucky State Medical Society. By RICHARD A. COWLING, A. M., M. D., Louisville, Ky. (Delivered before the Kentucky State Medical Society, at Frankfort, April, 1878.) Pp. 10.

Conclusions of the Board of Experts authorized by Congress to Investigate the Yellow Fever Epidemic of 1878. Pp. 45. STANFORD E. CHAILLE, M. D., New Orleans, La., Secretary.

A Contribution to the Medicinal Treatment of Chronic Trigeminal Neuralgia. By E. C. SEGUIN, M. D., New York, N. Y. (Reprint from *Medical Record*, Jan. 4, 1879.) Pp. 13.

Clinical Lecture on Syphilitic Brain Lesions. By same Author. (Reprint from *New York Medical Journal*, September, 1878.) Pp. 8.

Report on Aconitia in Trigeminal Neuralgia. By same Author. (Reprint from *New York Medical Journal*, December, 1878.) Pp. 10.

Diagnosis of Progressive Locomotor Ataxia. By same Author. (*American Clinical Lectures*, Vol. III, No. 12.) Pp. 17.

Contribution to the Pathological Anatomy of Disseminated Cerebro-Spinal Sclerosis. By Drs. E. C. SEGUIN, J. C. SHAW, Brooklyn, N. Y., and A. VAN DERVEER, of Albany, N. Y. (Reprint from *Journal of Nervous and Mental Disease*, April, 1878.) Illustrated. Pp. 13.

Epilepsy Dependent upon Erosions of the Cervix Uteri. By GEO. J. ENGELMAN, M. D., St. Louis, Mo. Pp. 5.

Suggestions in the Treatment of Spinal Diseases and Curvature. By E. H. COOVER, M. D., Harrisburg, Pa. (From *Medical and Surgical Reporter*, April 13, 1878.) Pp. 4.

Editorial.

The Yellow Fever Epidemic, recently begun in Memphis, has cast a gloom over the Southern States. The outbreak has taken the people and a majority of the profession by surprise, in view of the rigid quarantine which was instituted early enough in the season, and also in view of the frequently repeated assertions of supposed experts to the effect that yellow fever can occur in the United States only as the result of importation. It would be folly longer to listen to such statements. It must be admitted that the disease is now indigenous to certain sections of this country.

After a thorough sifting of the evidence, we find that, in Memphis, the first case occurred in the person of Thomas Mulbrandon, who was taken with the initiative chill July 5th, and died during the fourth day of sickness. Not one complaint could be made about the sanitary condition of the premises, which are located on an elevated plateau. An occupant of the house last year was sick, but his disease is not known to have been yellow fever. The Mulbrandon family were not exposed to the fever last year. Nothing in the history of this case shows any reason whatever for supposing importation, or even contagion.

The second case was a Mrs. Maurice Tobin, who was also taken with the initiative chill on July 5th—about three or four hours after the Mulbrandon case—and died on the eighth day. The house is on a very elevated piece of ground, a mile distant from Mulbrandon's, and was not occupied during the epidemic of 1878. The sanitary surroundings were excellent. No exposure to the disease can be discovered.

Judge Ray was the third case. He had the initiative chill July 6th, and died on the fourth day. His house was about 500 yards from the Mulbrandon house.

The fourth case was Mr. Maurice Tobin, who was taken with the chill July 7th while nursing his wife, and died on the fourth day.

Judge Ray's son was also taken with the chill on July 7th, and died the following day.

J. E. R. Ray, Jr., was taken July 10th and recovered.

Since this latter date, the disease has been spreading over the city from several separate foci.

The disease has also appeared in Mississippi City, Miss., where there have been five or six cases and two deaths up to July 24th.

In New Orleans, Dr. S. M. Bemiss reports one case on July 28th.

These are the only places where the disease has as yet developed. A number of refugees from Memphis have had the fever since leaving home; but they are mostly in communities where no extension of the epidemic is apprehended.

We take no part in the discussions going on just now about quarantine. We may say this, however, that quarantinists find no help for their side by referring to the present epidemic. We must remark also that we are no advocates of penning in citizens in an afflicted or infected city. Their only safety is in refugeeing.

Besides, experience has shown that when once this epidemic seizes upon a city, the fire does not cease to burn until all the fuel is exhausted. Flushing the sewers, sweeping the streets, cleansing the houses, whitewashing walls, fumigating the atmosphere, the free use of disinfectants, the concussion of the air by cannon firing, the dosing of persons, etc.—all have been tried as prophylactics; but still the epidemic sweeps on in its work of destruction. It is rashness to attempt to fight such a destroyer. Leave no fuel to burn, and the fire will soon go out. There are places of safety. The mountainous regions of North Georgia, East Tennessee, Virginia, North Carolina, etc., are all points of safety where camps can be established for the refugees without danger to others.

The Howard Association in Memphis has taken the proper position in refusing to give work to unacclimated persons who are volunteering their services. When there is need for such help, they will announce the fact.

Whenever an epidemic of yellow fever begins, there are a number of the medical profession in all sections of the country who are anxious to go to the front. They imagine that the point of danger is their post of duty. They go forward, become early victims to the disease because most exposed; hence do no good, but simply become patients occupying the attentions of nurses and others who might have done more good elsewhere. Nine times in ten it is a wrong sense of duty that prompts an unacclimated or unprotected physician to volunteer his services in an epidemic. We look back upon the record of mortality and sickness last year in our profession from yellow fever. A great number who volunteered to go to the afflicted section had no more right to place themselves in the useless danger than have women and children to be on the line of battle when contending armies are actively engaged. Be sure it is duty that calls before recklessly volunteering to go into an avoidable danger.

The Discovery of Modern Surgical Anæsthesia being a matter of discussion again at this time in some sections, we take pleasure in still further establishing the claims of the late Dr. Crawford W. Long—so convincingly presented by Dr. J. Marion Sims, in the May No., 1877, of the *Virginia Medical Monthly*—by publishing the recent affidavits of two living witnesses. Both Drs. Carlton and Camak are physicians of established character in the community in which they reside.

ATHENS, GA., August 15, 1878.

I, the undersigned, do certify that in May, 1843, I assisted Dr. R. D. Moore in amputating the leg of a colored boy, Augustus, then the property of Mr. Wm. Stroud, who resided in this county; and that I distinctly recollect hearing Dr. R. D. Moore say, that "if I had thought of it before leaving home, I would have tried Dr. C. W. Long's great discovery", namely, the administration of sulphuric ether as an anæsthetic in performing the operation. Having neglected to bring the ether, Dr. Moore finally concluded to influence the patient with morphia, under which influence the operation was performed.

JOSEPH B. CARLTON, M. D.

ATHENS, GA., August 10, 1878.

This certifies that in the month of May, 1843, I was present and assisted Dr. R. D. Moore, of this place, in amputating a leg. He said to his three students (I being one), "If I had thought of it before leaving home, I would have tried Dr. Long's discovery," producing insensibility by inhalation of ether.

JAMES CAMAK, M. D.

Attest: ASA M. JACKSON, Ordinary of Clarke Co., Ga.

Saccharated Chloro-Pepsine.—This remarkable new agent has been tested, and ranked with saccharated pepsin and lactopeptine as a most useful remedy for dyspepsia. We would especially call attention to its use in those cases of pregnant women who suffer with nausea and vomiting. In most cases, it acts charmingly in lessening, if not entirely abating these unpleasant symptoms, while it promotes digestion and allows the nutritive functions to continue their work normally. We recommend it. As will be seen from the special advertisement on pink paper inside of this journal, it is manufactured by Mr. Benj. W. Dyer, of New York.

Dr. Alban S. Payne, of Markham, Fauquier Co., Va., has been elected Professor of Theory and Practice of Medicine

in the Southern Medical College, at Atlanta. He will go to his new field of labor immediately after the session of the Medical Society of Virginia, in October, at Alexandria. Dr. Payne has a large circle of friends in Virginia to congratulate him, and there are many in Atlanta to welcome him.

Dr. Levin S. Joynes—The Williamsburg, Va., correspondent of (Richmond) *Daily Dispatch*, of July 7th, 1879, in reporting the proceedings of the commencement exercises of William and Mary College, July 4th, says: "The honorary degree of Doctor of Laws was conferred on Dr. Levin S. Joynes, of Richmond city. We are sure no one more deserved this honored compliment than the distinguished physician above named, whose reputation is national, and whose scientific acquirements are so well known to all his professional associates."

Dr. George M. Beard left for a short tour in Europe, July 24, 1879. He is expected to read a paper on "Inebriety and Allied Nervous Diseases in America" before the British Medical Association soon to convene in Cork, Ireland.

Dr. J. Marion Sims, it is stated, will return to New York to re-enter practice there, on September 8th, 1879. Soon afterwards, his long desired book will be published. A specimen of the style of his book may be seen by referring to the leading article in the July number, 1879, of the *American Journal of Obstetrics*.

Queries and Answers.

Treatment of Nocturnal Cramps—Replies to "Patiens."

Mr. Editor,—In reply to "Patiens," in the July number (1879) of the *Virginia Medical Monthly*, I would suggest half a teaspoonful of soda bicarbonate in half a tumblerful of water at bedtime. I have seen this remedy highly spoken of in one of the English journals. Raising the head of the bed twelve inches has also been recommended. I am sorry I cannot give references, nor speak from experience. See Flint's *Practice of Medicine*, 3d edition, page 701.

Yours truly, R. ZIMMERMAN, M. D.,
171 Church Street, Toronto, Canada, July 8, 1879.

Mr. Editor,—In compliance with your request in the July No. of the *Va. Medical Monthly*, I would suggest to "Patiens" the use of quinia and nux vomica, or strychnia, as he might prefer, during the day; and the passage of the direct electric current through the limb from the origin of the nerves in the spinal column to the feet and toes, before retiring at night. Of course these remedies should be used in sufficiently large doses to produce appreciable results—say four grains of quinia, and one-quarter grain of extract nux vomica, or one-twentieth grain of strychnia every two hours during the day until the characteristic effects of these articles are made apparent. The electric current should be of moderate force, and continued ten or fifteen minutes each application. The stomach, liver and bowels should not be overlooked nor neglected, and six or eight grains each of mass. hydrarg. and comp. extract of colocynth, two or three nights in the week, followed with one or two drachms of extract senna and rhubarb, or half ounce of elixir rhamnus comp. early the next morning would doubtless afford material assistance in the case. The foregoing suggestions are made upon *general* principles only. A more minute knowledge of the Doctor's case might cause some change or modification in the treatment mentioned, and the suggestion of other efficient remedies not seemingly called for by the paucity of the symptoms in the case in the "*Monthly*." Salt water bathing, local and general, at home or at the seashore, would doubtless, however, prove an important auxiliary in the treatment of his case. The hypodermic use of morphia might be used for the relief of the paroxysms of cramp. Hoping the Doctor will obtain early relief, I am very respectfully and truly yours,

HARVEY L. BYRD, M. D.,
147 Edmondson Avenue, Baltimore, Md., July 15, 1879.

Mr. Editor,—If my elder brother who signs himself "Patiens" has not as yet done so, I would suggest the use of chloral hydrate, from 30 to 40 grains thrown into the rectum at bedtime, first thoroughly cleansing the bowel with tepid water, before using. Dilute sufficiently to prevent its acting as an irritant. Having for some years found this drug (used in this manner) a specific in very many similar affections, such as infantile convulsions, cramps consequent upon gastric and enteric trouble, hysteria, and especially eclampsia of pregnant and parturient women (reflex), I am prompted to suggest the use of this remedy, hoping it may prove of service to some individual, in the hands of any member of our profession who may not have heretofore used the remedy in this way.

Saltille, Va, July 15, 1879.

SUBSCRIBER.

A Paper Wanted on Epidemic Dysentery.

Mr. Editor.—There is one disease I wish to see "written up" by some Southern practitioner who has had actual experience with it (and there are many who have had this experience), to wit: *Epidemic Dysentery*, or more properly speaking "*Bloody Flux*." We are having a good deal of it here, and it is very fatal with children. I have seen a good deal of it, but mostly sporadic cases.

Yours, etc.,

R. FOWLER, M. D.,

Elmo, Texas, July 11, 1879.

Obituary Record.

Dr. E. S. Hunter.—At a called meeting of physicians of Greene county, Va., on Monday, June 30, 1879, Dr. Thomas M. Shearman was, on motion, called to the chair, and Dr. Q. R. Hume appointed Secretary. Whereupon Drs. G. B. Jennings, H. A. Sims and J. G. Stephens were appointed a committee to report upon the death of Dr. E. S. Hunter, and offered the following preamble and resolutions, which were unanimously adopted:

Whereas, By the dispensation of an Allwise Providence, our highly honored and sincerely beloved professional brother has been removed by death from our midst, therefore we adopt as an offering of affection and esteem to his memory, the following resolutions:

Resolved, That, in the death of Dr. E. S. Hunter, the profession has lost one of its brightest ornaments, a friend and gentleman, as well as a skillful physician; his family, a devoted and loving husband and father, and the community a benefactor to whom it owes a deep debt of gratitude.

Resolved, That we cherish his name as an estimable gentleman, emulating his virtues as a friend and physician.

Resolved, That we deeply sympathize with his family in their irreparable bereavement.

Resolved, That a copy of these resolutions be sent to the widow and children of the deceased as a testimonial of our high regard for his memory, and to the *Virginia Medical Monthly*, the *Gordonsville Gazette* and *Jeffersonian Republican* for publication.

THOS. M. SHEARMAN, Chairman.

Q. R. HUME, Secretary.

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Original Communications.

ART. I.—Consumption—Drinks, Food, Bathing, Exercise, Clothing and Treatment in Consumption. By JAMES H. SALISBURY, A. M., M. D., etc., Cleveland, Ohio.

I. DRINKS—Drink half a pint of hot water one hour before each meal and on retiring, for the purpose of washing out the slimy, yeasty, and bilious stomach before eating and sleeping. Drink a cup of clear tea, coffee, or beef tea (the latter free from fat) at each meal. During the interval, between two hours after and one hour before each meal, drink hot water or beef tea, if thirsty.

II. FOOD—*Meats*—Eat broiled beef-steak, which has been entirely freed from fat and bone. Have it seasoned to taste with salt, pepper and butter. For variety, use broiled chicken, broiled game, oysters, roasted in shell or broiled, broiled lamb or mutton (lean), broiled cod-fish (fresh and salt), broiled and baked fish free from fat, and broiled dried beef, chipped thin and sprinkled over beefsteak. A soft boiled egg may be taken occasionally at breakfast with the meat, if it does not heighten the color of the urine.

Bread.—Bread, toast, boiled rice, cracked wheat or oat meal mush may be eaten in the proportion of one part (by bulk) to from *four to six parts* of the meat. The bread should be free from sugar and raised with yeast. It may be made

from gluten flour, white flour, or Graham flour; corn meal should be avoided.

All things not previously enumerated, and the following articles of food should not be eaten, viz.: Beans, soups, sweets, pies, cakes, pickles, sauce, preserves, fruits, vegetables, greens, pancakes, fritters, crullers, griddle cakes and mush. Vinegar should also be avoided. Use butter, pepper and salt for seasoning; also use either Worcestershire or Halford sauce, mustard and horse radish, with lemon juice on meats if desired. Celery may be moderately used as a relish.

III. BATHS.—Take a soap and hot water bath twice a week for cleanliness, after which oil the entire body, rubbing in well. Every night sponge the body and limbs with one quart of hot water, in which put from two to four teaspoonfuls of aqua ammonia; after which rub well and wipe dry. Every morning, sponge off with a little hot water, wiping dry and rubbing thoroughly.

IV. CLOTHING.—Wear flannel next the skin, and dress comfortably warm. Change all clothing worn during the day, on retiring, so that it may be thoroughly aired for the following morning. Keep the clothing sweet and clean, by changing every other day.

V. EXERCISE.—Ride daily in the open air as much as possible, without fatigue. If not able to ride, the body and limbs should be rubbed and pounded all over for ten minutes morning, noon and night, by some one who has sufficient strength to do it thoroughly.

VI. MEALS.—Meals should be taken at regular intervals, and it is better not to sit down at a table where others are indulging in all kinds of food. Eat alone, or with those only who are on the same kind of diet. After the system gets in good running order, which is indicated by the urine flowing at the rate of three pints in twenty-four hours, and standing constantly at 1.020 density, the appetite becomes good, and usually more than three meals a day are desired. This desire for food should be gratified by allowing the patient a nice piece of broiled steak, with a cup of clear tea, coffee, hot water, or beef tea midway between breakfast and dinner, and dinner and supper.

VII. TREATMENT.—Before each meal, the patient should take a small dose of some good tonic. If there is a softened state of the tissues of the lungs, endangering hæmorrhage, something like the following would be a good tonic:

R̄.	Fluid extract	pyrus malus radice.....	℥ij.
“	“	witch hazel.....	℥iiss.
“	“	cinchona comp.....	℥iiss.
“	“	ginger.....	℥ss.
“	“	yerba santa.....	℥ij.
“	“	grindelia robusta, comp....	℥iiss.
“	“	sundew	℥j
“	“	water fennel seed.....	℥j.
“	“	orange peel.....	℥ss.

al. menth. pip. gtt. xx. ; al. winter green, gtt. xij.

M. S.: Take a teaspoonful in water before each meal. If the disease is complicated with chronic diarrhœa or consumption of the bowels, something like the following would be appropriate:

R̄.	Fluid extract	cranesbill.....	℥iiss.
“	“	ginger.....	℥ss.
“	“	witch hazel.....	℥iiss.
“	“	pyrus malus radice.....	℥ij.
“	“	ampelopsis.....	℥j.
“	“	yerba santa.....	℥iiss.
“	“	orange peel.....	℥ss.
“	“	winter green.....	℥ij.
“	“	chinchona comp.....	℥ij.

al. menth. pip., gtt. xv.

M. S.: Take a teaspoonful in water before each meal.

Immediately after each meal, should be given either 8 grs. of pepsin, 8 grs. of lactopeptine, or 8 grs. of pansaline. This latter remedy is composed as follows:

R̄.	Boudalt's pepsin.....	℥j
	Pancreatine.....	℥ij
	Phloridzine.....	℥ij
	Lactic acid.....	℥ij. M.

To sweeten the stomach and bowels and also aid in checking diarrhœa if there is any, give:

R̄. Carbolic acid (pure white crystals).....ʒss.

Aqua, ʒviij, al. menth. pip.....gtt. x.

M. S.: Take teaspoonful in a little water fifteen minutes after each meal.

To assist in making blood or to tone up the enervated nervous system, the following is a very good pill:

R̄. Pil. phosphorus.....(1-100 gr.)

Strychine.....(1-10 gr.)

Iron.....1 gr.

S.: Take a pill two hours after breakfast or dinner.

To invigorate and to improve the condition of the mucous membranes throughout the digestive tract, and to so tone up the throat and fauces as to prevent taking cold at every slight exposure, take the following:

R̄. Spts. ammonia, aromatic.....ʒviij.

Salicin.....ʒss.

M. S.: (Shake well before taking)—Dose:—Take from one-half to one teaspoonful in a wine glass of water one hour after each meal.

If there is constipation of the bowels, use the mildest means to stimulate their muscles and glands, so that they will move once every day about breakfast time if possible.

The following external applications will be found useful.

R̄. Emplastrum belladonnæ

(Spread with the alcoholic extract.)

S.: Apply to chest.

If there is danger of hæmorrhage, provide the patient with an atomizer and a weak solution of persulphate of iron (1 drachm to 8 ounces of water) and instruct him to have the apparatus in readiness, so that as soon as there are indications of bleeding, to inhale at once the spray of this mixture. It will check the bleeding in a few minutes.

R̄. Salzburg porous plasters.....two.

S.: Apply one over bowels and one between the shoulders.

If the directions here given are faithfully followed out and persisted in, consumption *in all its stages* becomes a curable disease.

All anodynes, that get the stomach out of order, are to

be rigidly avoided. The cure is accomplished by getting the system in splendid condition, when the urine becomes clear and flows at the rate of three pints daily—standing at 1.020 density; the appetite becomes enormous, so that from two to four pounds of nice lean beef are eaten daily with a relish.

The chills, fevers and sweats, grow lighter and lighter, and finally cease entirely; the blood-making process goes on rapidly; the blood vessels fill out; repair of tissues begins and goes steadily on; the eyes brighten; the cough gradually grows less and less; interstitial death, decay and disintegration of lung tissue ceases; the glow of health pervades the entire organism, and step by step the patient (if he perseveres) advances safely and surely toward health, which to reach only requires patience and the rigid observance of the rules here laid down. To accomplish this, the diet and treatment are to be closely and conscientiously carried out in all their details, with the soul and body of the patient enlisted in the good cause. Of course it takes time; for nature, after all does the work, and consequently all the changes must be physiological, and only as rapid as the human machine—when well run—can organize and repair. The physician must know precisely what to do, and do it. He must watch his patient daily, examining excretions, secretions and blood carefully and see that every part of the programme is faithfully and honestly carried out.

Any deviation from the right course can be detected at once, by an increase in fermentation, consequent biliousness, heightened color of urine and aggravation of cough, and all the other pathological symptoms. Patients cannot deceive the skilled physician in this field of positive work. If the directions are all rigidly followed the machine will soon get to running nicely and continue to do so, till thrown off the track by departures. These departures should be detected and corrected at once, or the patient begins to lose ground. No one need hope to handle consumption successfully simply by change of climate and medicine. It is a disease arising from continued unhealthy alimentation, and must be cured by removing the cause. This cause is fermenting food and the products of this fermentation. Car-

bonic acid gas, alcoholic and vinegar yeast and vinegar, are the important factors in developing the peculiar pathological symptoms, conditions and states in this dangerous and generally believed incurable complaint.

Consumption of the bowels can be produced at any time, in the human subject, in from 15 to 30 days, and consumption of the lungs inside of three months by special exclusive and continued feeding upon the diet that produces them.

The foregoing are a few pages from the work on *Consumption* which I have had for some time ready for publication. I have been treating this disease successfully for the past twenty years, and have had under my care during that time over one thousand cases. I have simply to say that the disease is so thoroughly worked up in all its details that I am able to produce it at will and as surely cure it. This any one can be satisfied of, by coming and watching the patients under treatment.

326 Euclid Avenue.

ART. II.—**Sympathetic Ophthalmia.** By JOSEPH A. WHITE, M. D.,
Late Professor of Eye and Ear Diseases in Washington University, Richmond,
Va. (Read before the Richmond Academy of Medicine, August 5th, 1879.)

I have chosen the subject of *sympathetic ophthalmia* for the evening, because it has hardly received that attention from the profession at large which its importance merits. It is an affection of much commoner occurrence than is usually supposed. It too often results from neglect on the part of the physician, in not warning his patient with an injured or lost eye, of its probable occurrence, and thus enabling him to take preventive measures.

Réclus, of Paris, defines it as “a collection of trophic or functional troubles which provoke in the other eye the traumatic or spontaneous lesions of the one first affected;” and he has collected many facts, old and new, to justify this definition.

In looking into the history of this affection, we find Bartholini, Bidloo, Tissot, and then Demours, to be the first who wrote anything upon the subject; but Mackenzie systema-

tized its study and offered a theory for the transmission of the inflammation from one eye to the other. Prichard advised the removal of the injured or diseased organ; and since then, many authors have given their attention to the subject.

According to almost universal authority, the point of departure for sympathetic ophthalmia, whether of a spontaneous or traumatic origin, seems to be, in the majority of cases, in pathological changes of the iris, choroid and ciliary body or the uveal tract of the eye first affected. Following upon injury of an eye, and more especially of the ciliary region, we generally encounter an inflammation of the iris of the plastic form, and frequently of an insidious and sub-acute type, which involves the choroid or ciliary body. This inflammation may go on to complete destruction and atrophy of the eye, or stop short of this, even leaving some amount of vision, and disappear without sympathetic trouble showing itself in the other eye. But at any time in the future, the disease may return again, either as a violent inflammation, or a mild, insidious affection with slight tenderness of the eye on pressure, and be followed by sympathetic ophthalmia; or the latter affection may show itself without the eye first affected again becoming inflamed.

No one who retains an injured eye, even if he can still see with it, is at any time free from the *probability* of sympathetic ophthalmia and loss of the other eye. Within my own experience, I have seen it occur at different intervals after the injury, varying from one week to forty years, but it most frequently appears within two or three months after the injury.

The commonest cause is injury of the uveal tract of the eye, and especially of the ciliary region, whether from cuts or penetrating wounds, or from a foreign body within the eye, or from a hard lens pressing upon the ciliary body, as after the old operation of couching, which tears the lens from its attachments and sets it loose within the eye, putting the latter in the condition of an eye enclosing a foreign body. Scars of the hard membranes anywhere are apt to produce it. We find it also in eyes lost from spontaneous causes, without traumatism. The fact that it occurs as secondary to sponta-

neous affections has not been universally conceded; but I think there are too many facts to uphold this view to be able to controvert it.

It frequently results from malignant iritis, from spontaneous cyclitis (Reich), from irido-choroiditis, from choroidal ossification, and from choroido-retinitis—in fact, from any inflammation of the uveal tract, which leaves chronic irritation with impaired vision. It usually shows itself in the second eye first, by some impairment of accommodation; *i. e.*, by inability to read as well as formerly, or by what the patient frequently calls cold in the eye, by injection of the conjunctival vessels, with a rosy zone around the cornea, and tenderness on pressure of the ciliary region; in some cases, lachrymation, intolerance of light, and pain are prominent symptoms; in others they are only slight.

This disease is often very slow and insidious, and is well developed before the patient is sufficiently alarmed to seek advice, unless he has been forewarned. Sometimes it has an intermittent character, the symptoms appearing and disappearing, of slight degree only; and again it comes on with great rapidity, and destroys the eye in spite of all efforts to check it. It is a very intractable and destructive disease, destroying the eye by binding the iris and capsule together, closing the pupil by dense deposits, altering the structure of the ciliary bodies and choroid, and ending by atrophy of the globe. It sometimes assumes the serous form of inflammation, and occasionally a mixed serous and plastic form—both more tractable than the ordinary plastic variety. In certain people, where one eye has been lost from injury or disease, we find predisposing causes at work to hasten the inception of sympathetic trouble—such as exaggerated fatigue of the eyes in work requiring extra convergence or accommodation, as in myopes, who are more liable than others to sympathetic inflammation.

Moreover, there must be sometimes individual predisposition to explain why, with the same identical lesions, this complication occurs in some persons and not in others; also why, in some, sympathetic ophthalmia follows early upon the injury, and in others it lies dormant as it were for many years,

and then, from some trivial or unknown cause, makes its appearance.

The mode of transmission or the mechanism by which the disease is conveyed from one eye to the other is a point still in dispute. The more general impression is that the fifth pair of nerves is the road along which it travels, starting and ending in the ciliary nerves. That the fifth is the trophic nerve of the eye has been proven by the recent experiments of Vulpian, Duval and Laborde in their investigations into the physiology of the fifth; and by those of Hayem, into ascending neuritis.

The theory is that, following upon an inflammation of the uveal tract, comes inflammation of the ciliary nerves. This neuritis spreads, reaches the ophthalmic ganglion, then passes along the nasal and ophthalmic nerves to the Casserion ganglion, and then to the trunk of the trigeminus. The irritation having arrived at the origin of the nerve, is transmitted to the commissural fibres of the medulla and to the origin of the opposite nerve, whence it descends to the eye of this side, as it ascended on the other. This is in accordance with what Niedieck, the physiologist, found in experimenting on rabbits, that irritative lesions of a nerve (*e. g.*, from cauterization—he used the sciatic nerve) could travel along the nerve, both in a centrifugal and centripetal direction (as in the spinal cord, the inflammation can pass up or down); and in some cases the nerve of the opposite side became inflamed.

Now, in stumps of eyes removed by enucleation, the most common pathological change is the alterations in the ciliary bodies. Round cells are found in large numbers, and according to Goldzieher, this cell proliferation extends into the sheaths of the ciliary nerves, and continues into the nerve itself, where numerous nuclei, pressing against one another, separate the fibrillæ. Certain parts of the neurilemma show such numbers of them as to form veritable nodules compressing the nerve fibres.

If this is so, it is natural to suppose that these nodules, by compression, keep up an irritative process which can be transmitted to the symmetrical nerves of the opposite side, by gradually passing to the main trunk, then to the centre, and

then along the opposite trunk, etc. Moreover, we may explain by these nodosities the intermittent character that ciliary neuralgia often assumes.

General pathology teaches us that the compression of sensitive nerves provokes phenomena of hyperaesthesia and anaesthesia, which is ordinarily explained by the theory of nervous excitability. This excitability, if kept up too long, is exhausted, and only recuperated by the nerve at the end of a certain length of time, which applies to the neuralgia of sympathetic ophthalmia.

Adolph Alt has made a very complete and valuable collection of 110 eyes enucleated for sympathetic ophthalmia, and afterwards examined anatomically; and he reports changes in the ciliary nerves in only $16\frac{2}{3}$ per cent. of the cases; although, in 99 per cent., there were pathological changes in the uveal tract. This small percentage of changes in the ciliary nerves does not agree with the above theory. Abnormalities in the retina and optic nerve, as a complication, were in such great proportion, that we might conclude the views of the earlier writers, Mackenzie and others, as to the optic nerve transmitting the disease to the other eye, were not so erroneous as generally supposed, and that the influence of the optic nerve in this regard has been underrated.

The transmission of the affection may be by the ciliary nerves directly, when they are diseased, by their reflex action, or by the optic nerve, and possibly also the influence of the sympathetic is to be taken into consideration. In other words, the whole nervous apparatus of the diseased eye takes part in the transmission of the affection to the other eye.

Now, in view of the fact that sympathetic ophthalmia is such a dangerous and almost inevitable result in injuries of the eye, involving the uveal tract, what course must we pursue? The question whether preventive enucleation is justifiable has been sufficiently discussed to enable me to say that nearly all ophthalmic surgeons are of accord on this subject, and some few rules have been laid down to guide us in this matter.

The injured eye should always be removed, according to

a recent treatise on this subject (Vigneaux), for the following troubles :

1. "In wounds of the ciliary region with loss of lens, or vitreous, or loss of vision.
2. In large wounds of the eye, with disorganization.
3. In penetration of the eye by a foreign body, with amaurosis.
4. In atrophied eyeballs, sensitive either spontaneously or on pressure.
5. In large anterior staphyloma, and small mustiple staphyloma of the sclero-corneal region, with loss of vision.
6. In irido-cyclitis, irido-choroiditis, irido-capsulitis, whether traumatic or spontaneous, with irreparable loss of vision, and chronic irritation. Under this heading comes eyes lost from couching for cataract.
7. In painless atrophied eyeballs, which prevent wearing a glass eye.
8. In all atrophied eyes which enclose a foreign body or osseous cup.
9. In absolute glaucoma not relieved by iridectomy.
10. All cases of doubt should be decided in favor of enucleation in preference to running any risk."

A seriously injured eye can never be worth the effort to save it, if by doing so we imperil its fellow. We sometimes find foreign bodies, such as shot, a piece of gun cap, a splinter of iron, etc., pass into the posterior chamber of the eye, and in such cases a very accurate history should be obtained. If seen immediately after the injury, unless the foreign substance is lying directly behind the iris on the ciliary body, we can see it by the aid of the ophthalmoscope. When within the range of removal, we may take it out with fair chances of recovery, provided we are sure it is the only particle that has entered the eye. But in case of such accidents, the history is nearly always imperfect; and if we are in doubt, we should solve it by removing the eye. More especially is this the case among the working classes, to whom economy of time is of such importance, and in those living at a distance from any ophthalmic surgeon. Among the educated classes in cities, to whom the situation can be comprehensively explained, the

surgeon can postpone such an operation, and watch the case from the first symptom of trouble. But even among persons of this class, we find they prefer removal of an injured eye to running any too great risk to the other. Possibly, it is to this right understanding of the risks they run that we so seldom find sympathetic ophthalmia in private practice in cities; it is almost confined to hospital and dispensary cases, who frequently refuse to submit to the operation of enucleation, because they can't understand the necessity for it, and have a horror of taking out an eye.

I, on one occasion, advised a dispensary patient to have an eye removed, with which he could see very well, because of the presence of a depressed scar across the sclero-corneal region, evidently involving the ciliary nerves. He had been injured by a pair of scissors being stuck in his eye; the wound had healed kindly, and he retained tolerably good vision, but would occasionally have slight attacks of cold in his eye (as he said), with some little pain. He received the suggestion with horror, and refused to submit to an operation. But within a year, he had a violent attack of sympathetic ophthalmia in the sound eye, which closed up the pupil and bound the iris to the capsule, but he passed from under my observation before the termination of his case. He then was blind in the best eye, his only dependence being the injured one, which was apparently still good.

Within the last few months, an engineer of the Chesapeake and Ohio Railway was sent to me from West Virginia, suffering from sympathetic sero-plastic inflammation of the uveal tract of the left eye, with such defective vision that he could not make out the shadows from the fingers held between his eye and a strong light. His right eye was atrophied. His history was that, 12 months previously, his right eye had become inflamed from some, to him, unknown cause, which had gone on gradually to complete atrophy of the globe. Some physicians advised him to have the stump out, which he either did not relish or did not heed. It had healed, gave him no discomfort, though blind, and his left eye was good. Ten months afterwards he noticed his left eye slightly reddened; he could not read clearly, and though there was no

pain, the eye was quite tender to the touch. It got better, but he soon had a second attack, which went on to complete clouding of the media. The eye was very tender to the touch, very sensitive to the light, with a constant flow of tears. The conjunctiva and sclera were much injected; the anterior chamber was very deep; the cornea and the vitreous were clouded; there were some iritic adhesions, and the tension was increased. I immediately removed the lost eye, put a seton in the temple, performed paracentesis of the anterior chamber, and put him on atropine locally, and iodide of potassium gr. x and bichloride of mercury gr. $\frac{1}{16}$ th internally, *ter die*. I was obliged to repeat the paracentesis five times in the first week before he began to mend. He could then count fingers at 12 inches, distinguish the thumb from the other fingers, had no lachrymation, no intolerance of light; the cornea had cleared up very much, the iris was free, and the tension was normal. I kept him under observation a week longer, and sent him home counting fingers at 18 inches or 2 feet, under directions to continue the atropia lotion, the internal administration of potash and mercury, and to keep up the counter-irritation by the seton. He has entirely recovered, and is running his engine.

Here was a case of spontaneous inflammation of the uveal tract, destroying the right eye and causing sympathetic inflammation in the left eye, which fortunately recovered, which is the exception and not the rule in sympathetic troubles. I believe that had enucleation of the right eye been performed early enough, he would have escaped the attack in the left eye.*

Sometimes, though rarely, sympathetic trouble shows itself after the lost eye has been removed. Dr. Derby reported an interesting case of this kind at the meeting of the Ophthalmological Society in 1874. Last winter, for the first and only time, I met such a case:

An Irish woman, 50 years of age, came to my office with

* Since the above was written, this patient came to me for a glass eye. The left eye was apparently perfect; his vision was $\frac{20}{40}$, and he could read No. 2 Snellen without difficulty. An ophthalmoscopic examination showed that he had had choroido-retinitis, of which there still remained traces, and there were floating opacities in the vitreous—some quite large.

her neice's child, who was suffering from purulent ophthalmia. I noticed the woman had lost one eye, and on questioning her, I found it was the result of an attack of small-pox thirty-five years previously. I advised her to have the stump removed, telling her of the risk she ran. Her reply was, she had escaped for thirty-five years, and would carry the stump to her grave with her—the horror of the operation outweighing the danger she ran to the other eye. Four months later, I was called to her, and found her suffering agony from panophthalmitis of the stump, with no trouble in the good eye. I removed the stump, and, eight or ten days later, the good eye became reddened, clouded and very tender to pressure. The immediate and constant use of a strong solution of atropia, with leeches to the temple and mercury internally, caused the trouble to disappear. It was evidently sympathetic trouble, which had possibly started on its journey before the stump had been removed, and showed itself a short time after.

Enucleation is generally considered a perfectly safe operation, though some authors have reported deaths supposed to be traceable to it, and in many cases, it is a decided benefit to the patient in point of economy of time. Instead of going through a protracted inflammation of the eye following an injury, with the necessitated loss of time from daily pursuits (not to speak of the danger of sympathetic trouble), a timely removal of the injured eye gives immediate relief, and within twenty-four hours the patient is following his usual avocation, with a guarantee of safety to his good eye.

Of late years, a substitute has been proposed for enucleation. In 1866, Graefe suggested that in certain cases of injury, without much deformity to the eye, and in cases of chorio-retinitis, the section of the ciliary and optic nerves posteriorly, without removing the globe, might answer the same purpose in obviating the danger of sympathetic trouble, and leave the patient a better appearance than a glass eye could give him. This idea was first put into execution by E. Meyer and A. Weber, in 1866. Graefe himself operated in this way in 1867 on a patient who was suffering from annoying photopsia and chromatopsia. Secondi and Lawrence, in 1868, and Landsberg, in 1869, were the next to perform it. Schöler has operated in this way ten times; Hirschberg six times, and Schweigger twenty times.

The commonest mode of operating is as follows : Turn the eye in with the forceps ; open the conjunctiva, tenotomize the external rectus, and pass a suture through the cut tendon. Then cut the conjunctiva above and below the cornea to insertions of the upper and lower recti muscles. Roll the eye in and cut the optic nerve. At the moment of section, lift the ball up so as to cut the nerve far back. If the hæmorrhage is strong and the eye protrudes, shut the lids and compress the eye. When the hæmorrhage ceases, cut through the ciliary nerves posteriorly, and press upon the external canthus with the finger whilst drawing the eye forcibly inwards with the forceps, thus rotating the cut optic nerve extremity outwards. Then see if the cornea is anæsthetic, which will demonstrate that the nerves are cut. Re-adjust the external rectus to the sclerotic, and suture the conjunctival wound.

This operation is called "optico-ciliary neurotomy," and is suggested as a substitute for enucleation in many cases, and notably in those where, with a plump, natural-looking organ, the eye has been so injured or so affected by disease that sympathetic ophthalmia is to be apprehended. In the majority of the class of cases needing operative interference for injury, I think enucleation is hardly substituted by "optico-ciliary neurotomy;" but as yet the operation has not had a fair trial, and may have a great future before it.

The treatment of sympathetic ophthalmia after it has once begun, is very unsatisfactory. If we can obtain a full and free dilatation of the pupil in the beginning of the affection, or make a broad iridectomy before the adhesions of the iris are too extensive, we may look to a favorable termination ; otherwise, the prognosis is very unfavorable, and the eye goes on, in spite of treatment, to atrophy. This reason alone is a sufficiently weighty one to make us resort to preventive measures, and cause us to decide any doubt in favor of enucleation rather than run too great risks by expectant treatment.

ART. III.—**Impotence and Sterility—Their Causes and Treatment by Electricity and Damiana, etc.** By JOHN J. CALDWELL, M. D., Baltimore, Md. (Read before the Baltimore Medical and Surgical Society, September, 1879.)

ERECTILE TISSUES.—We should first consider a few anatomico-physiological facts.

It is often difficult to give a definition which will convey a clear idea of what we desire. Under such circumstances, we resort to more extended descriptions. When the genital organs of the male or female become enlarged, turgid and firm to the touch, from excitement, we say they are in a state of erection, and the organ is composed of *erectile tissue*. This is merely a physical description. When we further examine this tissue, during erection, it is found to be full of blood. This is merely the physical condition, and conveys no idea of anatomical structure of the parts, nor the accessory condition necessary to a state of erection.

It was natural to suppose that erectile tissue is confined to the genital apparatus of the male and female, and such seems to be the opinion of Boeckel and Robert; but when the anatomical structure came to be carefully examined, other views had to be adopted. Perhaps no better illustration of the fact above insisted upon, viz., that function depends upon structure, can be adduced than by the study of erectile tissue. It will be found that erectility depends upon peculiarity of tissues and their arrangement—the chief elements concerned being vascular and muscular, which are presided over by nervous tissue, which receives its power from certain portions of spinal nervous tissue. The vascular tissues are arterial and venous, whose structural arrangement is peculiar, so that blood may flow to the parts, and be impeded in its return. It appears that, in order to effect this result, muscular tissue of a peculiar structure and arrangement is necessary. When in a state of erection, the sensibilities of the parts are in a state of excitation. There is great vascular and nervous excitement—exaltation. Hence there is a sudden and remarkable accumulation of blood in the tissue, which is the immediate cause of the erection. The return of blood is

prevented, and the erection continues on account of the peculiar mechanism of the tissue itself; pressure is exercised on the veins or sinuses by bands of muscular fibres, so that there is an accumulation of blood, which has been rapidly conveyed to the parts, through the arteries. These muscular bands are supplied by nerves, in much the same way as the vessels—from centres located in the spinal cord, and are often called the *nervi-erigentes*. It follows that, whenever we find the peculiar arrangement of the peculiar tissues, we have tissue capable of erectility—we have erectile tissue.

It will be seen that this kind of tissue is not confined to the genital organs, although here we find it in greater quantities and most clearly to be determined by the anatomist. Erectile tissue exists in the walls of the vagina, in the uterus (which we regard as an erectile organ), in the extremities of the Fallopian tubes, and in the wings of the ovaries. It exists likewise in the iris and in many other parts of the body. In all, the property of erection depends upon the peculiar arrangement of the vascular, muscular, and nervous tissues.

The nervous influence is conveyed by the vaso-motor system, which term is descriptive of the function. The peripheral vaso-motor nervous apparatus consists of a great number of small ganglia, situated in the walls of the muscular vessels, and give off nerve fibres to the same, and connect through other ganglia with the spinal cord, and act by reflex power from the vessel to the cord, or *vice versa*. Besides these nerves, certain others emanate from the spinal cord, to terminate peripherally in the ganglia known as *vaso-dilators*, and are inhibitory, or act to arrest, in varying degrees, the vaso-motor action, thus diminishing the tone of the vessels and permitting them to expand under the pressure of the blood.

The whole forms a beautiful piece of mechanism, whereby, under the orders of certain nerve centres, it is set in motion. Blood flows in by the arteries, regulated by the vaso-motors; the veins receive it and dilate under the direction of the vaso-dilators; the muscular bands are brought into play by the nerve power conveyed to them—the result being what we call erection. When nerve power is exhausted, or its exalta-

tion diminished, muscles relax, veins contract, the parts are freed from blood, and the tissue shrinks into its usual state of indifference.

Whence comes this nervous influence? We have said from the spinal cord. This leads us back to a genito-spinal centre in the cord, vaso-motor, but, as above stated, no nervous centre can act of its *will*—that is, originate action. There must be an excitant to action to generate nerve force to act upon the apparatus which composes the erectile tissue. The opinion has long obtained that the spinal marrow presided, so to speak, over the organs of generation, that here was generated the nerve power concerned in the preparation for their functional activity, which, by its connection with the brain, gives rise to the ecstastic sensations necessary to incitement, resulting in procreation; and which in like manner, excited in the brain, bring these spinal functions into activity.

But medical science did not rest satisfied with so vague a declaration as that the spinal cord presides over this function. Experiment goes far to show that the lower part of the spinal cord presides over the motions of the generative organs. Budge laid bare the spinal cord of a rabbit, and at the same time exposed the testicle, the vas deferens and seminal vessels of one side. On irritating the lumbar portions of the cord corresponding to the fourth lumbar nerve, active motions in the vas deferens and seminal vessels were produced, beginning at the testicle, and were propagated towards the corresponding seminal vessels. The irritation of no other part of the cord produced such effects.

These experiments have been made on the female with similar results, exciting movements of the uterus. It is therefore inferred that the development of the Graafian vesicle and the escape of the seminal fluid are attended with much nervous excitement and with the pleasurable excitement which ends the act of coitus.

The nervous centres which are connected with the brain, on the one hand through the spinal cord, and, on the other, with the organs of generation, may be excited to action, and their influence manifested both by the emotions originating

in the brain, or may be propagated by excitement commencing in the organs of generation themselves. The impression originating either in the brain, or in the organs, being propagated to these centres, will be manifested by erection and other phenomena, if the necessary conditions obtain.

It would therefore appear that the functions of the organs of generation are intimately connected, and more or less dependent upon the vaso-motor apparatus, which are the carriers of nerve force to erectile tissue; and further, that the inhibitory action exerted by the sensory centres throughout the cord, exercise an important influence over the circulation. To this we must attribute the periodical and rhythmical action of the heart and respiration, blushing, rage, pallor and suffusion. To the intimate relation and anatomical connection between all parts of the nervous system with the brain, must we attribute the fact that there is not an action of the body, whether voluntary or involuntary, that may not be influenced by the peculiar state of the mind at the time.

IMPOTENCE AND STERILITY.—*Impotence*.—A distinction may be drawn between impotence and sterility. Sterility in man results from the non-production of spermatozoa; in woman, from non-ovulation. Impotence may be applied to any morbid state which may impair or destroy the vitality of the ova or spermatozoa after their secretion, or which may prevent that contact necessary to fecundation. It follows that in man impotence may be congenital or acquired, or due to malformation of the penis, to deficient development, or the effects of disease, preventing the deposit of the semen within the vagina, so that it may be conveyed to the ovary or ovum. On the other hand, the mechanical apparatus may be in perfect order, and yet the forces necessary to put it in operation may be wanting—I mean nerve power.

A variety of causes may impair, either temporarily or permanently, the production of this nervous force or energy. Thus various mental conditions, such as violent emotions of any kind, anger, anxiety, grief, disgust, want of confidence, impair the sexual functions. These are temporary in their results, and require no medical treatment—only “minister to a mind diseased;” “pluck from the memory a rooted sorrow,” etc.

Protracted fevers and chronic diseases generally impair the nervous system, the intellectual faculties, and those centres which preside over the function of generation. Opium eating, excessive use of tobacco, especially pipe and cigarette smoking, also lessens genito-urinary excitability; chewing, however, is not so injurious as smoking. In small quantities, alcoholic drinks—more especially the French wines—excite the amatory desire; although when used in large quantities, especially whiskey, the person, whilst under its influence, is impotent, and his desire for the future is blunted. Excessive venery also exhausts this function; and lastly, masturbation will, in time, utterly destroy the procreative powers; and what is a curious fact, destroy, on the part of the victim of the vile practice, all desire for the opposite sex, and the power to perform the act of amatory collision.

The same line of remark applies to impotence in women—any condition, congenital or acquired, which prevents the passage of spermatozoa to the ovary, or which prevents the descent of the ova to the uterus, will cause impotence. Among congenital causes may be mentioned imperforate hymen, adhesion of the labia, and the various abnormal conditions of vagina, of uterus, or Fallopian tubes. Among the acquired causes may be mentioned flexions and prolapsus of uterus, diseases of the os and neck, cervical and vaginal leucorrhœa—conditions which prevent the upward passage of spermatozoa, or destroy their vitality. Causes which impair the nervous energy of the system, such as already mentioned, when considering impotence of men, equally apply to women, in addition to which may be mentioned dysmenorrhœa, and more especially that variety called *membranous dysmenorrhœa*.

Syphilis is rarely (most unfortunately) the cause of impotence in men; in women more frequently it is a cause of sterility, because it is one of the most potent causes of abortion.

Sterility is a rare condition of men; more common with women. It may be congenital from defective development. The testes may be absent in man; the ovaries in women. Sterility may result from disease, or accident; disease of testicles may result in sterility in man; disease of ovaries

in women. Malposition of testes is said to cause sterility; whilst the act of generation may be performed, there is no contained spermatozoa.

TREATMENT.—The limit of this paper will not permit the discussion of all the causes and conditions which result in impotence and sterility in men and women, but simply the general principles involved. It is evident that a full consideration would require a volume of no inconsiderable size. Having presented some of the important points, we will now, as briefly as possibly, consider the principles of treatment and some of the remedies which, in our hands, have proved efficient.

It is evident that there is no remedy for those cases in which the necessary organs are absent from want of development or in consequence of disease. We will not here consider those conditions which are amenable to surgical skill, either in man or woman; nor yet those cases caused by disease of the vagina or uterus, as these belong to the department of the gynæcologist. We are thus limited to that class dependent upon general or special causes which produce impotence or sterility from want of due nervous energy or nerve power.

Those cases which arise as the consequence of protracted disease, or low grade of fever, will generally recover under the use of those remedies which repair the ravages of disease, such as stimulating diet, nutritious food, tonics, malt, beef-steak, exercise, mountain air or sea bathing. These invigorate the general system, enrich the blood, repair the nervous system, and restore its functions—"when good digestion will wait on appetite, and health on both."

One of the finest restoratives, when the patient can react, is the *shower bath* poured upon the lower part of the spine; vigorous friction with flesh brush or coarse towel must follow its use. This is most excellent for old men and women, who are gradually losing power which is generally lost before desire.

Electricity.—But the most potent stimulant to the nervous system which we possess is electricity in some form, either static, dynamic or interrupted. It has long been known that muscular contraction may be caused by electricity. This is

due to the action of this agent upon the nervous system, stimulating the production of nerve force, as well as the direct stimulation by the agent to the muscles themselves. In cases of partial paralysis, electricity acts in both ways, not only on the nerve centres, but also on muscular tissue and the vaso-motors and inhibitory apparatus; circulation is thus promoted, and also the processes of nutrition and repair. Thus the entire apparatus—nervous, vascular and muscular—are often restored to health and vigor. In those cases where erection is imperfect, or where ejaculation take place too quickly, and without pleasurable sensation, electricity is a powerful adjuvant to treatment. Westwring, a Swedish physician, reports the cure of such a case, the result of debauchery, by the continuous current. M. Slacxues cured a case of impotence by shocks from a Leyden jar. M. Duchenne has been successful with faradization of the testicles and spermatic cord. M. Seultz and M. Rauband report good results from galvanic treatment of such cases. Want of erectile power is curable by electricity, by faradization of the ischio-cavernous and bulbo-cavernous muscles. It is applicable to cases of sexual hypochondriasis, where patients, for some reason or other, imagine that they are impotent, but where virile power is not really impaired. Anæsthesia of the sexual organs may be relieved by electricity; it is always a powerful adjuvant in such cases.

It is not unreasonable to suppose that the secretion of semen may be restored by galvanizing the spermatic nerves or the testicles in those cases in which there is want of nervous innervation. At least, in such cases the power of electricity deserves a trial.

We have said that masturbation is one of the causes of impotence in man. This practice is accompanied by spermatorrhœa. We do not pretend that electricity alone will cure these cases; but when we remember that such cases are attended with profound disturbance of the central nervous system, it is evident that so potent a nerve tonic and stimulant as this agent is known to be must be a most powerful adjuvant to other treatment.

In regard to the mode of applying this agent, a word may

be said. According to Benedict, we should place the copper pole of the *constant battery* over the lumbar vertebræ, and pass the zinc pole, forty or fifty times, in the direction of the spermatic cord; then transversely over the different zones of the upper and lower surface of the thighs, and then, likewise, in the perineum. The sittings should last two or three minutes, about three times a fortnight. The copper pole should be applied by means of a catheter-shaped sound to the vicinity of the ejaculatory duct, and passes should be made with the zinc pole in the direction of the spermatic cord, if there are any particularly insensitive places. Benedict uses Faraday's galvanic brush; and if the testicles are peculiarly insensible, he passes a strong current through them. The sittings should take place every day, and should be continued for some time, as improvement does not take place for months in some cases.

Schultz, in Vienna, has, for a long time, used the induced current for pollutions and impotence. Under this treatment, the success was very poor; but he claims that it is greater since he has commenced using the constant current. He places the positive pole over the fifth dorsal vertebra; the negative over the sacrum, or on the perineum. The sitting should last from one to three minutes, to be repeated three or four times a week. Schultz employs a battery with twenty or thirty Stöhrer elements of medium size.

Electricity is applicable to the treatment of many cases of *amenorrhœa*. Dr. Golding-Bird expresses his belief that it is the only direct emmenagogue we possess, and that it always excites menstruation where the uterus is capable of performing that function. Electricity is especially valuable as an emmenagogue in young women, where the menstrual function has not yet been fully established in consequence of a torpid state of the vaso-motor nerves of the ovaries and uterus; and also when the catamenia have been suppressed after labor, or in consequence of a chill or emotion. Faradization of the womb has been practised with good results. Electricity may be applied also to those cases of defective involution of the uterus, in which this organ is enlarged and impotence the result. Galvanic pessaries have also been used with good

results in such cases. Dr. G. Murray succeeded by the introduction of the galvanic pessary in reducing, in the course of a fortnight, the large and flabby uterus to its normal and healthy condition.

Damiana.—We will next ask attention to the following cases which have been treated by electricity, and also to the effect of other remedies, and more especially to damiana: Before any permanent effect can be derived from damiana, the system must be fully brought under its influence. There should be a dessert spoonful of the extract given three or four times daily, and continued for one, two, or three weeks. I regard it as purely tonic in its effects upon the nervous centres which preside over the urino-genital apparatus. My attention was called to its use by a friend who obtained it from the western part of Mexico. I gave it to a young man (by way of experiment) who suffered from a passive hæmorrhage from the lungs. The tincture increased his appetite and improved his digestion, but he was forced to discontinue its use on account of its exciting action upon the urino-genital organs, causing increase in the secretion of urine and excessive sexual desire. In the case of Mr. —, a large athletic man, a specific effect was produced after its use, for nearly three weeks. In the case of Mrs. K., sexual desire was increased, or rather restored by the use of a drachm of the fluid extract twice a day for three or four weeks.

The following case exemplifies the power of electricity and damiana to restore sexual power and invigorate the general health: It was the case of Mr. —, aged 55, who was the subject of alcoholism, from which resulted impotence, with partial paralysis and atrophy of the lower extremities. Tincture of damiana was given in half ounce doses three times a day, and electricity was applied externally. There was much irritation of the spinal cord throughout. Different parts of the spinal cord were subjected to the galvanic current—the coccygeal spine, the nape of the neck, back of the ear, and through the brain at the lambdoidal sutures; the current was passed also over the temporal process, through the pneumogastric and sympathetic, etc. This treatment (continued a year) resulted in the restoration of health and sexual power;

good diet aided the cure, whilst alcoholic drinks were forbidden.

We have used damiana in combination with electricity in many cases of partial loss of virility with marked success. I have satisfied myself of the power of damiana alone in relieving persons in whom there was reduced sexual power, when I could find no organic lesion of the sexual organs. Thus, I was consulted by Mr. F. W., who complained of failure in his effort at copulation, because of partial loss of power of erection. The history of the case showed the cause to be excessive venery. He was relieved by use of damiana (fluid extract) in tablespoonful doses.

I was consulted by a gentleman who complained of loss of power and desire for sexual congress; he had pain in the head—an indescribable sensation about the head. He had much business trouble. A free use of damiana was followed by marked improvement.

Mr. —'s case presents some interesting points. When in bed alone, his erections were sufficient, but in company with a woman, he utterly failed to perform the act. There was no lesion of the organs. I reported this case as a failure. Electricity, rest, cold-bath, and the free use of damiana utterly failed.

In cases of impotence from masturbation, accompanied with spermatorrhœa, we find morbid changes of the vesiculæ seminales, ejaculatory ducts, bulbous portion of urethra and prostrate gland. Such cases require surgical and special treatment, but I have found much advantage to result from the use of electricity and the free use of damiana. These agents possess a tonic power over the nervous apparatus generally, and act most favorable upon the nerve centres presiding over the functions of the urino-genital organs. I do not hesitate, from my experience in the use of damiana, to continue my recommendation of it to the consideration of the profession, asking, for the genuine article, a fair trial.

I will conclude this article by asking attention to the application of electricity in diagnosing the condition of the urethral canal, and long, dark passages which have undergone organic changes from the effects of disease. A silver

or silver-plated sound must be used, lubricated with a saturated solution of fresh iodized oil. This sound is to be passed into the urethra and then connected with the positive pole of the galvanic battery; the negative pole is attached to a large, fine sponge, saturated with a solution of chloride of sodium. The sponge is to be applied to the sacral spine, or perineum. After the lapse of three to five minutes, the sound is withdrawn, when the shape and size of the ulcers will be found to have been shadowed upon the sound by a deposit of iodide of silver.

ART. IV.—**The Primer of the Clinical Microscope.** (Made at the Boston Optical Works.) By EPHRAIM CUTTER, M. D., Boston, Mass. (Copyright reserved.)

(Continued from page 385, August No., 1879.)

Having thus given a brief account of the clinical microscope, it is proposed next to give examples of its use, so plain that it is hoped the average intelligence can repeat them.

EXAMPLE I.—*Hair*.—This is a coarse object for the clinical microscope; still its marked characters are so striking, that the novice would do well to practise with it. Its size and color make it visible long before it comes into focus. An easy mode of mounting a specimen of hair, for examination, is as follows: Put a small drop of clear water on the centre of the slide; then take a small pencil of hair (removed from the beard or head) between the left thumb and forefinger. Cut the free end off, square, with scissors. Then holding the hair over the drop of water, cut a section $\frac{1}{4}$ -inch in length, transversely. Enough pieces of hair will fall into the drop to make an object for practice, when they are covered with a covering glass, and the excess of water removed by a bibulant, such as a blotter or cotton cloth touched to the edge of the superfluous drop. When this is done, the slide can be put in any position, and the cover will not move, as the capillarity will hold it close and fixed. The removal of the excess of liquid from the object is a necessary procedure in the use of this clinical microscope, for obvious reasons.

The next step is to place the slide, *cover* towards the objective, under the clips of the stage. A hair can then be readily brought over the centre of the objective, by observation with the naked eye. The facility with which objects can be found by this manipulation and holding is a recommendation of the clinical microscope. It saves time which otherwise might be lost.

Of course, the next thing is to turn the microscope towards the illumination—be it diffuse daylight, a white cloud, reflected sunlight, lamp or gas light. The observer gazes through the microscope as he would through a telescope—holding the barrel with the right hand and the stage with the left hand.

(It is well to have the clipped part of the stage uppermost. The left forefinger may be above and the thumb below.)

It is probable that a faint outline of the hair will be perceived. Holding the stage still (as above), turn the barrel with the right hand. If the object becomes more distinct, keep on turning till it becomes clearly in focus. If, however, the object becomes more dim, turn in the opposite direction until the image is clearly seen. This turning backwards and forwards is termed the "fine adjustment." Look for the cortical portion of the hair, its imbrications like shingles, its medullary portion. Note the coloring matter, and get a general idea of the physical features as one on picket scrutinizes a new comer in war times. Move the slide about on the stage, and bring successive hairs into the field of vision. Focus off and on if each hair is not perfectly clear and distinct.

Pluck out a hair by the root, cut it off over water as above directed, and then the physical features of the bulb can be studied. Study comparatively the hairs of different parts of the body, of different races, ages and sexes, of animals and insects. Also study the hairs and connected glands of plants. These may be obtained by sections of leaves and stems, or by wetting leaves in water and then gently scraping off the cuticle with a lancet or delicate knife-blade. A portion of the pulp is placed on the slide, gently teased out with needles or pins, and covered with a cover. Water is added or re-

moved as may be necessary to make the cover stick; and then proceed as with the first case. Many hours and days could be profitably occupied in the study of *hairs*.

II.—*Urinology*.—Things needed: microscope, urine (put in a clear wineglass or bottle or tumbler), pipette or catheter, slide, cover, light, bibulant.

Suppose we have a case of *oxaluria*. Having previously decanted the clear urine and poured that portion containing the deposit into the urine glass, tumbler or bottle, note the situation of the deposit. Then holding the pipette between the right thumb and middle finger, close the upper end tightly with the forefinger. Bring the free end of the pipette near to the deposit in the urine, and then remove the forefinger. The hydrostatic pressure forces the deposit into the tube; next re-apply the forefinger. Withdraw the tube, and deposit on the middle of the slide *one* drop containing the sediment. Apply the cover to the drop. If the amount of liquid is rightly gauged, the capillary attraction will cause the cover to adhere, so that the slide can be turned in any direction, and the cover will not slip. If the cover does slip, absorb the excess of fluid by touching the edge of the cover with a blotter or dry cloth. The specimen is then ready for examination. Proceed, as in the case of the hairs, after bringing the deposit over the centre of the object, as near as possible.

Remarks.—Be sure the barrel of the microscope is pushed home against the tube of the stand. In the case of a delicate object like this, it is a good plan to turn the stage quite near to the objective; and then in focussing, it is only necessary to turn the stage off.

On having mastered the hair demonstration, the novice had better take off the specimen, when in focus, and prepare the urinary deposit, with the same slide and cover. Having accomplished this, the object comes into focus almost at once. There is, then, an advantage in the use of the same slide and cover for many examinations.

If *oxalate of lime* is present, beautiful and characteristic octahedral crystals will plainly appear. Once seen, they will not afterwards need identification.

Note.—It sometimes happens with such transparent objects as oxalate of lime, that the focussing is difficult. If so, move the slide so that the edge of the cover comes in the centre of the field. Focus it clear, and then move the deposit to the centre of the objective's face, and it will be readily focussed. Also, there is usually too much light with the clinical microscope. If so, the observer may retreat away from it, or darken the room by day time, so as to cut off cross lights.

Triple Phosphates (ammonia and magnesia).—These appear in large white and transparent crystals—common and harmless. Bright's disease—Urine coagulated by heat and nitric acid, large cylindrical bodies (casts) in the fattily degenerated epithelium, granular detritus, etc.

Ague plants.—These float in flocks half way down the column of liquid. Under the microscope, they appear as circular bodies with double periphery enclosing a clear interspace, with a central granular of green or red contents. (Species of *Palmellae*, described by Salisbury, see *American Journal Med. Sciences*, 1866; *Revue Scientifique*, Nov. 1869.)

(For other pathological bodies, see the Systemic Works.)

Remarks.—The following foreign substances, to be classed as *dirt*, are found in urine: Cotton, silk, linen and other fibres of textile fabrics, feathers, silica, woody fibres, bast, pitted cells, etc., yeast plants, and often fungi, etc.

Bacteria and Vibriones.—Keep urine for a few days until it stinks. Put a drop under the cover, removing the excess with a bibulant. Examined under the microscope, numberless minute swarming threads or rods, combined with dots, all in protoplasmic motion, will be clearly seen. If it is desired to amplify them more, attach to the stand a tube of 10 inches length, of pasteboard or of brass, whose diameter is sufficient to receive the eye-piece at one end, and at the other end to fit the barrel or tube of the microscope. Thus a greater distance of the eye-piece from the object is obtained; and consequently an enlargement of the object, on the principle of shadows lengthening as their course is removed from the source of light.

Note.—Bacteria are often confounded with the spore of entophytal (*εντοος* within; *φυτον*, life or being) algae and

fungi. This department needs study more than any other, as there is so much difference of opinion amongst authorities. It is probably true that bacteria are mixed with the spores of the vegetation—for example, of a yeast in the case of the fetid putrefactive fermentative vegetation. In place of exhaling carbonic acid gas, they give off sulpho-hydric acid gas and other gases, possibly phospho-hydric; so that bacteria do not form all the bodies found in fetid urine. They are mingled with the spores of other vegetations in the same way as in a phanerogamous forest all the trees are not of the same species.

Urinological evidence must always be taken in connection with the rational and physical signs accompanying. At present, the urine receives more attention than any other excretion or tissue. There are others equally and more important.

To give anything like a complete idea of *urinology* is out of the question. (See Beale's *Microscope in Medicine*; also, Richardson & Wyeth on the *Microscope*.) The following list of substances to be found in urine is taken from Beale, in addition to those already named: 1. Starches of different grains. 2. Fragments of tea leaves, spiral tissue and parenchyma. 3. Oil from catheter, milk or butter. 4. Mustard, cheese, potato skin, fruits. (These the student should study and know away from urine.) 5. Uric acid. 6. Cystine. 7. Carbonate of lime. 8. Sarcinæ (found at Fresh Pond and a lagoon at Oak Bluffs, Mass.). 9. Spermatozoa. 10. Casts of the seminal tubes. 11. Dumb-bell crystals of the oxalate of lime. 12. Casts of uriniferous tubes—epithelial, waxy, fatty, granular. 13. Chyle. 14. Urates. 15. Phosphate of lime. 16. Cancer cells, exudation corpuscles. 17. Small organic globules (Golding-Bird). 18. Granular matter, &c.

III. *Mouth*. This is a handy site for microscopic investigation. Take a clean slide and cover; gently scrape the upper surface of the tongue with the cover itself or with a knife blade, collecting only a small drop of not more than $\frac{1}{4}$ inch longest diameter; place the cover with the drop on the slide, or deposit a drop from the blade on the slide, covering as before. If properly managed, the cover will adhere

to the slide, and it can be put in any position. Place this prepared slide on the stage and focus as described before. The following objects should be seen if the observation is made before or sometime after a meal, which scours off the tongue rapidly. 1. *Epithelial Cells*.—These are flat, wrinkled, irregularly squared bodies, with a nucleus or spot within. Sometimes there are two. They line the mouth, cover the tongue, and are found on all the mucous surfaces of the body (see systemic works). 2. Globes filled with granules actively moving with protoplasmic motions; also containing nuclei. These are *mucous corpuscles* with the famous Brunonian movements. They are a good test for an objective. To bring out well the dancing movements of the minute points is also a good test of the observer's powers. It would be well to lengthen out the tube as just described. 3. *Filaments of an Alga*.—Some call it a fungus vegetation that grows harmlessly with its host. The filaments are very delicate and subtile. It is known as the *leptothrix buccalis*. 4. *Masses of Spores* which may or may not belong to the *leptothrix*. 5. Some of the *papillæ* of the tongue. 6. Vegetations about the teeth from *decaying particles* of retained food. 7. *Foreign substances*, etc.

MOUTH IN DISEASE.—*Aphthæ* are examined by scraping off some portion of the white pellicle and depositing on a slide. It is then covered. If there is not enough moisture to hold on the cover, a small drop of water placed on the periphery will penetrate underneath the cover and hold it by attraction. If the specimen does not show filaments, spores and sporangia (spore cases), it may be from the fact that it is not teased apart enough. A layer of too great thickness can be thinned by tearing into small shreds by pins or needles. So, also, can the membrane in croup, or diphtheria, etc., be studied.

Sputa embrace not only the discharges from the mouth, but also from the pharynx, larynx, trachea and bronchial tubes. The productions of so large a territory with thousands of glandular structures, furnish a collection motley in disease. We name some: 1. Clear, structureless mucus, in which the form elements float. 2. Epithelial cells—pave-

ment, cylindrical and ciliated. 3. Mucous cells, protoplasmic, and usually undergoing the amœboid (amœba means changing) movements. They appear in all sorts of weird, bizarre shapes, found best in acute bronchitis and catarrh. 4. Blood in pneumonitis and hæmoptysis. 5. Curling spiral pulmonary tissue (phthisis). 6. Fungi—vegetative mycelial (*μυκος*, mushroom) filaments, spores, sporangia. 7. Foreign substances inhaled in the air. 8. Calculi of the lung (Salisbury). 9. *Asthmatos ciliaris* in contagious colds. (See *Va. Med. Monthly*, Nov., 1878, and April, 1879.)

Nasal excretion contains mucous cells, concretions of more or less solidity, pus, blood, ciliated and non-ciliated epithelium, dirt, *asthmato ciliaris*, vegetative filaments, pollen (hay-asthma), etc. The *tears* are remarkably free from any form elements; but in the contagious colds, the *asthmato ciliaris* is found in the thick, ocular excretion by Salisbury. Epithelium, pus and blood are found in ophthalmiæ. Cataract is a good object on which to study fatty degeneration. I have found the fibres a darkly outlined, rough substance, granular, very much different from the clear hyaline fibres seen in health.

Ears.—Place the cerumen on a slide, with or without water or glycerine. In the amorphous substance, crystals of cholesterine, fungi, pus and blood are found. A drop of *milk* placed on the slide and treated as described above, shows a field full of globules of fat, all molecularly dancing and tumbling about in ceaseless motions. These are physical, not protoplasmic, movements. If the specimen be taken in the first flow of milk, the colostrum corpuscles will be seen as large, aggregated, compound globules.

Milk should present no foreign bodies. Swill milk presents such (Piper). Vegetations are readily developed in milk by keeping. It is an instructive study to examine milk often until it is soured. A few comparative examinations of milk of known purity will serve as a standard by which to judge the morphology of diseased or suspected milk. A microscopical should always go with a chemical analysis of milk. We are much indebted to the labors of Dr. Piper, of Chicago, for light in this direction.

Vaginal discharges furnish a field for the microscope. A drop is deposited as described. Cancer may be thus at times determined.

The detection of parasites, the establishment of virility of the husband in sterile marriages, the detection of syphilitic and gonorrhœal vegetations, the presence of spermatozoa in a case of rape, would be of value.

Fæces.—This is an extensive but not well-cultivated field. Macroscopic should precede the microscopic examination. A small piece of wood (toothpick) serves to deposit a minute portion on the slide; the cover holds usually without aid. Among the things to be seen are the eggs of intestinal worms—fermentative vegetations—epithelial cells in various stages of development (cholera). The best dissections of the spiral tissues of plants are obtained from the fæces by stirring up with water. Dr. Salisbury has cultivated this repulsive field, and is the best expert in this department that the writer knows of.

The *Skin* is a fruitful field of study. It may be wet with water and then rubbed with a knife blade, for example, and the collected drop may be mounted on the slide; or the scum of a bath-tub, after a bath without soap, may be studied. The following may be looked for: 1. Epithelium without nucleus. 2. Itch insects. 3. Fungi of skin diseases. 4. Foreign substances from the clothing, sweat and atmosphere, cryptogamic spores and filaments, cotton, silk, linen, woolen and woody fibres, hairs, salts from sweat, starch grains, cystine, fat and fat acids from the sebaceous glands, sand, smoke products, coal dust, harvest bugs, ticks and other insects, vegetations of boils and carbuncles, bloody sweat, comedones, etc.

The study of histology belongs rather to the anatomist and the dissecting room. Still the clinician may study the characters of tumors, outgrowths, the contents of cysts, abscesses, etc., which are relieved by aspiration. It is easy to see the form elements of ovarian and fibro-cystic tumors. A drop, treated as before directed, will furnish a field. Though time has not verified Drysdale's ovarian corpuscle and Gluge's compound cells as diagnostic, still their characters are well

worth studying. For making thin sections of tissues, they may be set in wax, paraffine or tallow, and cut with a well-sharpened razor—Seiler's cutter recommended.

The clinician should know the morphology of the air of respiration found in crowded rooms, ill-ventilated apartments, shops, hospitals, of districts infected with disease (contagious or not), of court rooms, of ague districts, of ships, prisons, of school rooms, of sewers, etc.

Methods.—1. Simple exposure of slides smeared with glycerine in the apartments named. 2. Arrange a funnel on a vane, so that the wind will always blow through the nose on to the slide placed against it. 3. Aspiration by air sucked or blown over or against the prepared slide. 4. Fill a glass bottle or other vessel with a mixture of salt and ice. An examination of the drops of water that collect on the outside will furnish some of the forms of matter that float in the atmosphere. 5. Blow air through cotton fibre, which remarkably arrests foreign aerial bodies; examine the cotton directly, or wash it with water that is known to be free from forms of life or mineral matter, or with which the observer is familiar. It should never be forgotten that air is food, and should be pure.

VEGETABLE FOOD.—Starch.—Scrape a small portion of the pulp of a *common potato*. Place it on a slide; add a minute drop of water; cover, and treat as before described. The beautiful grains of starch will clearly appear. Once seen, their form cannot be forgotten by the careful observer.

Wheat.—Place a drop of water on a slide; stir in a minute portion of flour; rub with the flat surface of a common case knife into a uniform mixture; then examine with the microscope. The forms of the starch grains will be seen to vary much from those found in the potato. The same processes applied to rye, oat, corn (maize), barley, sago, tapioca, etc., will give a clear idea of starch and amyloid bodies. In case the cellulose coverings of wheat are examined as found in real Graham flour, dark cells, set like bricks in mortar, are the so-called "gluten cells," on which so much stress is rightly laid as being true nerve food. The changes that occur in cooking is strikingly shown in beans.

One has only to make a section of the bean before cooking and compare it with a portion of the same after baking, for example, to satisfy himself on this point. This list might be extended indefinitely; but it is believed that enough has been indicated to show how much work can be done with this simple clinical microscope by the practical man.

With a brief allusion to the examination of the *blood* we close. The clinical examination of blood is a matter of great importance. The profession is indebted to Dr. J. H. Salisbury for opening up a new physical means of diagnosis by the inspection of the blood under the microscope. The field is so new that some find it easier to ignore it rather than to study it in detail. I am not prepared to say that everything that Dr. Salisbury has pointed out (some 67 states, conditions and products) are just as he describes; but I can say that in everything he has attempted to point out to me, personally, in the course of 12 years, he has succeeded in doing. I think I am doing no wrong to ask the profession to attend to what I have to say and to show, especially as I state nothing but what I believe to be the truth, and have demonstrated, to my own satisfaction if not to others. (*Vide* "Blood Examinations," by Dr. Salisbury; published by Moorhead, Bond & Co., New York, 1868. Also, a paper on the Morphology of Diseased Blood. *Southern Clinic*, March, 1879.)

Preliminaries.—It is necessary to have the patient, the microscope, the light, the means of withdrawal of the blood (a lancet—spring lancet—the scarificator of the writer, a needle, which is not the best thing) all together. There is no such thing as taking the blood home to examine. The changes are so rapid that most of the important ones disappear in ten minutes time. Still, after these are gone, many valuable points remain to be looked for.

Kind of Blood.—The capillary—not the venous nor arterial.

Site of Withdrawal.—On the radial edge of the forearm between the wrist and elbow. The skin should be clean and free from hair. If dirty, wash with soap suds or ammonia water.

Note.—It is well that the beginners should study the skin

surface, dirt and epithelium, before looking at the blood. Take the patient's forearm in the hand and make the skin tense in the interval between the thumb and forefinger. A quick puncture is then made about one-eighth of an inch deep. The tension of the grip will squeeze out a drop of blood. The size of the drop should bear a direct relation to the size of the cover. If of the right size, the blood will diffuse itself uniformly between the cover and slide. The cover will not slip. If there is too little blood, the corpuscles will become crenated—that is, wrinkled from a sort of protoplasmic action induced by too much dryness in the space about the blood. If there is too much, the superfluity will float the cover about; there will be too much thickness of the film, and it will crowd the red corpuscles so much as to render them indistinguishable. The excess must be removed by a bibulant. Very much depends on handling the drop of blood rightly. When the drop evenly diffuses itself, it is presumed that the film is about uniform in thickness, so that one can judge somewhat as to the comparative number of corpuscles in each specimen. The process of transferring the blood should not take but a few seconds of time; a fraction should be sufficient.

Of course, the slide and cover should be previously cleaned, and also the microscope should be free from dirt and in focus, as after a previous use. If the blood specimen is quickly placed on the stage, it will be in focus at once, and the rapid movements, changes, and morphological elements will be visible.

The novice had better scrutinize carefully everything he sees—not caring whether he knows the name of the object or not. The following is the Salisbury plan:

For our purpose, we will divide the field into three divisions. (1.) The colored corpuscles. (2.) The colorless corpuscles. (3.) Serum.

Note the following about the *red corpuscles*: (1.) In normal proportion. (2.) In excess. (3.) In diminished quantity. (4.) Normal consistence. (5.) Too soft, plastic, and sticky; adhering together and being drawn out in thread-like prolongations. (6.) Nummulated, like rolls of

coin. (7.) Not nummulated. (8.) Evenly and loosely scattered over the field. (9.) Slightly grouped. (10.) In irregular, compact masses. (11.) In ridges. (12.) Holding firmly the coloring matter, yet soft and plastic. (13.) High-colored, smooth and even in outline, hard and rigid. (14.) Allowing the coloring matter to escape freely, obscuring their outlines. (15.) Mammilated.

As to *colorless corpuscles*, note if they are (1) In normal proportion. (2) In too small quantity. (3) In excess. (4) Normal in quantity, sticky and plastic, endangering the formation of thrombi and emboli. (5) Ragged and broken down. (6) In excess ragged and broken. (7) In excess, smooth and even. (8) Containing vacuoles. (9) Containing vegetations that distend them to an enormous size.

As to *serum*, note (1) Too little. (2) Too much. (3) Normal. Also, the following foreign matters: 1. Minute grains and ragged masses of black, blue, brown or yellow pigment. 2. Fat. 3. Amyloid matter. 4. Broken-down parent cells. 5. Thrombi of fibrin, filled or not with granular or crystalline matters. 6. Thrombi of algæ spores. 7. Thrombi of algæ filaments. 8. Algæ filaments and spores without aggregation. 9. Fungi spores. 10. Fungi filaments. 11. Oxalate of lime. 12. Crystine. 13. Phosphates. 14. Stelline. 15. Stellurine. 16. Granules and crystals of a miscellaneous character. 17. Conchoidine. 18. Pigmentine. 19. Eucine. 20. Creatine. 21. Uric acid and urates. 22. Inosite. 23. Zymotosis regularis spores. 24. Zymotosis regularis mycelial filaments. 25. Entophyticus hæmaticus spores. 26. Spores of mycelial filaments. 27. Penicillum quadrifidum spores and mycelial filaments. 28. Penicillum botrytis infestans.

To cite a specific example, take *syphilis* (see *American Journal Medical Sciences*, April, 1867): If the novice takes a well-marked case in the later stages, and collects the blood as designated, he will find that the white corpuscles are enlarged and distended with the entophytal growths; also, some cylindrical, smooth, uniform, clubbed at the ends, mycelial filaments of *crypta syphilitica*, which are copper-colored when slightly turned off from the focus; also, if the

light is good, small spots will appear in profusion, which must be distinguished from globules of fat, that are copper-colored, and have the protoplasmic movements of ordinary spores, to wit.: they dance about in the serum spaces; and besides, their lateral movements, which might be taken for physical motions, they locomote often, moving by each other in opposite directions. Also, they may be seen to dissipate under the eye and be lost to the vision. Moreover, they are seen inside the white corpuscles to be of a red color. I have found the copper-colored spores and enlarged white corpuscles in all cases that I have examined. The filaments are not so readily found. Whatever else may be said of this diagnosis, I can say for myself that I have found it invaluable in my own practical experience. I have been able thus to treat cases that otherwise would have baffled me. I don't think that the value of this physical exploration can be too highly estimated.

The Pre-Embolie State.—(See *Chicago Medical Journal*, Feb., 1879.) If the blood of a rheumatic is examined often, there are found, according to Dr. Salisbury (*American Journal Medical Sciences*, October, 1867, page 350), microscopic thrombi (Figure 5, page 376, *ut supra*). The nucleus of these is a collection of white corpuscles, a collection of crystals, &c. They form skeins like a sailor's fancy coil of rope, or masses irregularly rounded and pointed, like a boy's **A** kite. Now these thrombi, of a microscopic character, are found in the blood long before there are any signs of embolism. They are quite large and easily distinguished. The attention of the novice is directed to this as an important point in all respects.

Rheumatism.—(See *American Journal Medical Sciences*, October, 1867.)

Ague.—(See *American Journal Medical Sciences*, October, 1866.) To collect the ague plants in the natural habitat, I have found an easy task. During the month of August, visit an ague locality; examine the surface of earth that has been spaded up within a month; note the fine white dust, as if the earth had been sprinkled with fine salt. Take a minute portion of this dust; place it in a slide; add a drop of water;

he is as good a man as he ever was, and is able to support his family, which he had not been able to do for a long time.

CASE II.—J. B., colored, aged 35, a delicate mulatto, came to my office in June, 1878, to consult me about his case. Like the first, he could only pass his water drop at a time; but there was no fistula nor abscess in the perineum. He frequently had attacks of retention of urine, which became more and more alarming—the last continuing twenty-four hours. When he came to me, he said one of his attacks was coming on. Dr. Nathan Smith, of Baltimore, had treated him for stricture by dilatation about four years before he came to me, but he had failed to carry out the instructions the Doctor gave him about using the bougie, consequently the stricture had returned, and was worse than ever. I introduced Nos. 1 and 2 filiform bougies—the water running slowly after their use. I then endeavored to dilate, but could not pass a larger than No. 4 French bougie. This state of things continued until the 1st of July, when another acute attack came on, and all efforts to pass an instrument failed. I then decided to divide the stricture by the external operation.

Assisted by Drs. Beckwith, Budd, Leigh and Cary, of Gloucester county, Va., the man was chloroformed, and with a steel sound held firmly down on the stricture (which, I neglected to state, was at the junction of the bulbous and membranous portion of the urethra), I cut straight in the median line to the point of the sound, and then slowly on from before backwards through the indurated tissue, without any guide but the strictured urethral tract, until the water flowed freely through the cut. I then tried to pass the sound on into the bladder, but could not, nor could I find the opening with a probe through the cut in the perineum, and all of our endeavors to do so failed entirely. As the retention was relieved, and there was danger in using the knife any further, without a guide, I determined to wait, and let the water flow several days through the cut, before trying again to pass the instrument. I confess that at this point I felt great apprehension as to the result of the operation, but concluded that the safest course was to wait developments, and trust to Nature's efforts. In this, I was not disappointed, for with the exception of some slight fever, all went on well, and on the 7th day I passed a small curved silver probe from the perineal opening into the bladder. Letting it remain, I passed a No. 4 silver catheter from the meatus by the side of the probe into the

bladder. After that there was not much difficulty. It took some time to close the perineal opening entirely.

When I last saw him he was well, and attending to his work.

In the cases given above both of the maxims accepted by the profession generally, that "a stricture being permeable to instruments, external division is contraindicated;" and the reverse teaching of Mr. Lynn, "to make permeability an indispensable prerequisite to the performance of external division," were departed from; and I cannot see why such cases as mine may not occur in the practice of every member of the profession. In the first case, the stricture had never been passed, although various attempts had been made before I saw him. Drs. Beckwith Budd, and I made several attempts, with and without chloroform, but to no purpose, until the day of the operation, when Dr. Budd succeeded in passing an instrument with which we had tried and failed several times previously.

It may be thought that even then the case might have been treated by dilatation; but when I cut down on the hard tortuous tract of the urethra, I was satisfied that had I withdrawn the bougie before dividing the stricture, I would probably never have been able to pass it again. In the second case, I was at first able to pass an instrument, and afterwards failed in every attempt to do so, but the fact of his having previously suffered with retention, and being then threatened with an attack made it imperative, that I should do something decisive.

The operation without a guide I found very tedious and unsatisfactory, and except under similar circumstances I would not be willing to perform it.

I have notes of nine cases of stricture, some of them very close, treated successfully by dilatation, since the date of the above operation.

The white of an egg will destroy the bitter taste of quinine, and render it palatable and acceptable to delicate stomachs.
Med. Brief.

Ovariectomy for the Removal of a Multilocular Cyst weighing Forty Pounds—Fatal—Pedicle Ligatures Cut Short and Returned—Carbolic Acid Internally to Prevent Septic Poisoning. By T. B. WILKERSON, M. D., Young's Cross Roads, Granville Co., N. C.

Rebecca D., a bright mulatto, æt. 28 years, mother of five children, of a tuberculous diathesis, consulted me in March, 1879, for an enlargement of the abdominal cavity. She stated that this trouble commenced about two and a-half years prior to the above date, gradually distending the parietes from the left groin towards the median line. Up to the last four months back, she could distinctly feel the rolling of the growth about in the cavity when stooping or bending over to the right side. Menstruation ceased from the first noticed inception of the growth; and she, having had the usual symptoms characteristic of her former pregnancies, was led for the first nine months to believe that she was *enciente*. After placing the patient in a recumbent position on her back, an examination was made of the uterus. To the touch, the os externum was found to be soft and patulous; the introduction of the probe showed the cavity to be of normal size; uterus mobile. During palpation, a distinct fluctuation could readily be seen and felt. Percussion gave a dull sound over the front, with a slight tympanitic resonance over the epigastric, and still fainter over the bilateral lumbar region. The parietes could be raised from the adjacent growth; but owing to the extreme distension of the parts, a very indistinct outline could be traced of the tumor, but sufficient to warrant the belief in the fluid contents of the sac; and the general absence from the beginning and during the growth of the tumor of any marked peritoneal inflammation, led me to hope that only a few, if any, adhesions would be found to the parietes or to the internal abdominal viscera.

The condition of the woman at this time was bad; emaciation extreme, night sweats constant, nausea with coliquative diarrhœa all foretold an early fatal termination of the case, unless some active measure could stay the progress of the disease. With difficulty could she move from her bed or drag herself across the floor. She was given nitric acid and opium mixture—the opium to be replaced by quinine when the bowels were controlled. Under this treatment, a change for the better began. Six days prior to the time appointed for the operation, a pill of carbolic acid, gtt. j, sulph. quin., gr. j, was given thrice a day.

Having brought the system to its maximum point of ton-

icity on the 3d day of June, 1879, and the patient having previously taken 30 grains quinine to prevent surgical shock, she was placed on a narrow table before a good light; her head and body were raised above the line of the pelvis, when she was brought under chloroform. Assisted by Drs. P. W. Young and J. B. Williams, of Oxford, N. C., an incision four inches in length, commencing just above the symphysis pubis, was made in the median line through skin and adipose tissue, down to the sheath of the recti muscles; the fibrous structure was divided on a grooved director. Coming down on the belly of the right rectus, the director was pushed across towards the left, until the linea alba was reached, when I separated the inter-muscular space. Having arrested all bleeding, the peritoneum was divided on the director to the full extent of the external incision. Very little ascitic fluid escaped; the shining cyst of the tumor was now in view. After dipping the hand in artificial serum, the finger was passed around the walls of the tumor. Failing to detect any adhesions, the sound was used with a similar result. Turning the patient on the left side, the sac being held by a vulsellum in the hands of an assistant, both walls of the cyst were punctured by a trocar, and their contents were drawn off. The sac was then readily brought out through the abdominal incision. The pedicle was about two and a half inches in width and a half inch in thickness. A needle, armed with a double carbolized ligature, was passed through the centre: the thread was divided at the eye of the needle; each lateral half of the pedicle was securely ligated and then divided above the ligatures by the *écraseur*. The ends of the strings were cut short, and the pedicle was returned to the abdominal cavity. The peritoneum and internal viscera having been thoroughly cleansed of all extraneous matter, the wound was closed by the interrupted carbolized suture. Cloths moistened in carbolized glycerine were laid on the wound and retained by a broad bandage. The patient was placed in bed, warm irons were put to the feet, and a gum catheter was left in the bladder. At the beginning, the pulse stood 145; after the operation it subsided to 100. There were considerable nausea and vomiting, which were quieted in a measure by the hypodermic use of sulphate of morphia. One of the following pills was given morning, noon and night:

R. Acid. carbolic.....gtt. xij.

Quiniæ sulphatis.....

Pulv. opii..... \overline{a} grs. xij.

M. Fit pillulas No. xij.

The patient continued to improve—pulse ranging from 90 to 100; tongue moist; skin natural warmth; no tenderness over the pelvic cavity at any time. Up to the sixth day, the progress of the case was highly favorable. At this time she was cheerful, laughing and talking, and complained of being hungry. The decubitus was on the back during the treatment. The abdominal wound healed by the first intention. On the evening of the sixth day after the operation, some friend brought in a basket of cherries and green apples, of which she partook heartily. In a few hours afterwards, she was taken with a violent attack of flatulent colic, to the severe paroxysms of which the patient succumbed, despite all remedial measures. But for this imprudence, notwithstanding the unfavorable prognosis given prior to the operation, the case, in all likelihood, would have terminated favorably. But, unfortunately, amongst this people, whether in severe sickness or undergoing grave surgical operations, it is impossible to have them given (by their own color) that care and attention so necessary for their vital welfare.

The tumor was made up chiefly of two large cysts. The envelope and contents weighed 40 pounds. Right ovary healthy.

The proper disposition of the pedicle has been a mooted question ever since ovariectomy became an established operation. Spencer Wells, who has probably operated on a greater number of cases than any man living, is the great advocate for the application of the clamp to, and the retention of the pedicle in, the line of the external abdominal wound. He states that the only four cases in which he ever ligated the pedicle and returned it to the pelvic cavity perished; but he is candid enough to admit that these patients would have died no matter what device had been employed. The objection urged by Mr. Wells and his followers to the return of the divided stump is, that the constricted tissues and loop of deligation may produce an undue amount of irritation, acting as foreign material; or should the constricted parts become encysted, the loop may excite an unhealthy action in the walls of the surrounding cyst, leading to the formation of an abscess that might finally discharge its contents into the vagina, rectum, or back into the peritoneal cavity.

On the other side stands Dr. Tyler Smith, who ties the pedicle, cuts short the ends of the ligatures, and returns the

stump to the pelvic cavity. This plan of treatment has proven highly successful in his hands, and has likewise been very satisfactorily practised in the United States by Drs. Peaslee and others.

Dr. Clay ligates the pedicle, returns it to the cavity, bringing out the ligature through the lower angle of the abdominal wound—the ends of the ligatures there acting as drainage tubes.

These three modes include the general plan of treatment pursued in these cases. Statistics about equally balance the different operations.

I called the attention of the medical profession through the columns of the September No., 1876, *Virginia Medical Monthly*, to a very successful plan of treatment pursued by me during the late sectional war and since, in the management of ligatures in amputations, namely, to cut short the ends of the threads, leaving the loop on the artery to be cared for by nature, thereby greatly diminishing suppuration, and, by getting rid of as much foreign material as possible, tending to lessen the dangers of septic poisoning. I have never yet seen the least trouble arise from this proceeding. The silk ligature thoroughly carbolized, with its outer surface coated with carbolized wax, presents as innocuous a material as the surgeon could wish—one that will not be likely to irritate the most delicate surfaces, and one that will readily become and remain quickly encysted.

I call the attention of surgeons to the use of carbolic acid internally prior to and after all operations of a grave character, especially where much suppuration is to be apprehended; for it is a self-evident fact that during each inspiration, the lungs are taking in an atmosphere surcharged with fermentative germs likely to produce highly deleterious effects wherever a proper nidus is afforded for their deposit. It is actually as necessary to disinfect the system internally to counteract the noxious propagating qualities of these germs, as it is to disinfect the external wound with the view of destroying the surrounding prejudicial matters. With the system fully imbued with the great disinfectant, carbolic acid, we place on the patient the best armor for self-defence.

Fibro-Cellular Tumor of the Hard Palate Removed—Recovery. By H. M. GRANT, M. D., D. D. S. (Read before the Abingdon (Va.) Academy of Medicine, February 3, 1879.)

About the 1st of November, 1878, I was consulted by Mr. J. H. D., aged 23, who was suffering from an immense tumor, situated in the roof of his mouth, and almost filled the oral cavity. The history of the case, as given me by the patient and his family, was as follows: In September, 1873, he fell upon the right superior maxillary, by which accident the second superior molar tooth of that side was broken off, and the palatine fang driven up into the roof of the mouth, within the body of the bone. Some eight months afterwards, he felt a hard tumor or protuberance near the mesial line of the hard palate, which continued to increase in size up to the time I first saw him.

Upon examination of the case, I found the tumor to be tubulated or of irregular form, very firm in texture, filling the entire oral cavity; its base extended from the palatine surface of the incisor and cuspid teeth (which were all displaced forward, until their position was almost horizontal with the plane of the coronal points of the upper teeth in their natural position) to the posterior border of the hard palate and base of the *azygos uvulæ* muscles; and laterally from the palatine border of the alveolæ of the bicuspid and molar teeth on the right side to the same point on the left, encroaching upon the molar teeth and bicuspid, until they were also forced out of position, and some of them protruded through the cheek on either side. The jaws were distended to such an extent from the growth and size of the tumor, that his countenance was most hideously disfigured, and the patient was an object of commiseration. The integuments and mucous membrane had assumed a livid and congested appearance, but no ulcerative action had taken place except from the laceration of the cheek by the protruding teeth on either side.

Having determined upon excision, the following mode of procedure was adopted: The patient was given sulphate of quinia, grs. vj, one hour before the operation was begun, to prevent shock. He was then brought under the influence of chloric ether, consisting of two ounces of the former to one of the latter. The upper teeth were then all extracted. The first and second molars of the left side had been extracted some years before.

An incision was then made from the alveolar border of the central incisors backward along the mesial line to the poste-

rior border of the hard palate or periphery of the base of the tumor; another incision was made from a point opposite the anterior approximal surface of the first molar on the right side, to the same point on the left, and was carried down through the mucous membrane and integument as deep as the texture of the tumor would admit. The flaps, so to speak, were then dissected up, and carried to, and held to either side by small flexible tenacula prepared for the purpose, and attached to adhesive strips on the outside of the oral cavity. The body of the tumor was then brought to view. Then with a dental burring engine (Morrison's), with a small steel circular saw or disk, the substance of the tumor was cut away in sections down to the hard palate—being very careful to preserve the surface of the bone intact and uninjured. After the tumor was removed, the surface of the bone was thoroughly scraped with round pointed scrapers with cutting edges. The four flaps of mucous membrane were trimmed to fit, being careful to shape them to correspond with the arched roof of the mouth, and were brought together and held in juxtaposition by interrupted sutures made with silver wire—three on either side of the central point of union of the flaps—and held in position in contact with the arch by means of a spiral roll of lint. This was kept in position by means of a small spring, made of gold plate, so bent or curved as to fit the arch, and attached to a support resting upon the crowns of the second lower molar teeth. The jaws were brought into their natural position, and bound by a bandage, such as is used in fracture of the lower jaw. A piece of semi-vulcanized rubber was interposed as a support for the lower jaw, and for the admission of nourishment during the healing process.

The hæmorrhage was but slight, and was controlled by Monsel's solution of persulphate of iron. The patient soon recuperated from the effects of the anæsthetic, and quinia sulphate, grs. vj, was again administered. The oral cavity was thoroughly washed with a solution of carbolic acid, alternated with phenol-sodique, for ten days. The wound healed rapidly and kindly, and I am happy to state my patient has entirely recovered, and will be supplied with an upper denture as soon as the absorption of the alveolar process takes place.

I think that it was a fibro-cellular tumor. Its weight two hours after excision was four ounces and eight grains. Its texture was very firm—so much so as to resist the action of the knife, and could only be removed with a small circular saw or disk, and preserve the arch or roof of the mouth intact.

I.—Compound Dislocation of the Carpal Ends of both Ulnæ, followed by Tetanus and Death. II.—Compound Commi-nuted Fracture of the Inferior Maxilla, treated by Gutta Percha Splints—Recovery. (Clinical Cases in the "Retreat for the Sick," Richmond, Va.) Reported by THOMAS CARROLL, M. D., Late House Surgeon, etc.

I.—Compound Dislocation of the Carpal Ends of both Ulnæ, followed by Tetanus and Death.—Mrs. R., white, æt. 60 years. The recipient of this unique injury was admitted March 20th, 1879, under the care of Dr. Hugh M. Taylor. While walking in her sleep the night before, she fell down a flight of stairs; and in her efforts to catch herself, threw her hands in front of her in such a way as to receive the force of the fall upon them. The force was great enough to drive the heads of the ulnæ through the skin, and to free them of all ligamentous attachments for an inch or more. Besides the dislocations, her face was swollen and black with bruises. Dr. Taylor at once administered chloroform, reduced the dislocations, applied light retentive dressings, and ordered her to be taken to the "Retreat." She bore the transportation well, and expressed herself as being comfortable when admitted.

In reviewing the literature upon this unusual injury before visiting her the next day, Dr. Taylor was struck with the advice of many of the authors to excise the heads of the luxated bones in compound articular dislocations, as such an operation, it was claimed, would lessen the tendency to tetanus, while after simple reduction of the dislocation, tetanus frequently followed—due to pressure upon the adjacent nerves. Intending to act in accordance with these views, Dr. Taylor brought down his instruments with which to perform the operation; but upon finding the patient's condition so favorable, he concluded, with his assistants, that so long as conservative surgery offered such inducements, it was best not to resort to the operation. What this digression had to do with bringing about the fatal result, it is impossible to tell. The obscurity which shrouds the pathology of tetanus has not been sufficiently cleared to enable us to attribute it to pressure which necessitates excision. We can only go so far as to say that its cause was undoubtedly peripheral irritation, reflected through the spinal cord; and we know further that many causes other than pressure co-operate to bring this about.

The patient continued to do well until the 8th day, when unmistakable tetanic symptoms set in. The treatment for the control of the spasms was anything but successful; but the treatment directed towards nourishing the patient was eminently successful. Every physician who has seen well developed tetanus has seen each attempt of the patient to swallow a spoonful of milk bring on spasm after spasm. At Dr. Hunter McGuire's suggestion, Dr. Taylor tried a method which I consider of the highest surgical value. His plan was to give the patient chloroform twice a day; and while she was under its influence, to introduce a stomach tube, and through it to administer a pint or more of milk, etc. In this way life can be sustained without subjecting the patient to this exciting cause of the convulsion. This part of the treatment was eminently successful, and recommends itself to the profession. In this case death was certainly not brought about by starvation as is often the case, but by the overpowering effects of the disease.

II.—Compound Comminuted Fracture of the Inferior Maxilla treated by Gutta Percha Splints.—Although the lower jaw is the strongest bone in the face, it is more frequently fractured than any of the others. As it is often difficult to tell how to treat them, I wish to publish the result of this case in favor of gutta percha splints:

Chas. P., white, æt. 35, was admitted under the care of Dr. Hugh M. Taylor. The day before his admission, he was stamped in the face by a man with whom he had a quarrel and fight. Upon examination, he was found to have sustained a vertical fracture on the right side, midway between the mental foramen and the symphysis mentis. The displacement here was downwards and inwards, corresponding to the direction of the action of the depressor muscles of the chin. The continuity of the arch being broken here and at the angle, these muscles acted with effect in bringing about the deformity. The posterior fracture was on the same side and extended through the angle between the last molar tooth and the base of the ramus. The displacement here was also marked, and was brought about, I think, more by gravity than by muscular action.

The important question of the proper treatment was a perplexing one. The wire loop passed around the canine and first incisor teeth acted admirably well in retaining the ends here in apposition; but as the posterior fracture was behind the last molar tooth, there was nothing on the posterior frag-

ment on which a loop could be passed, or nothing upon which the vulcanized rubber would mould and hold if we used the interdental splint. The support must then come from the outside. We first tried a splint of pasteboard, held in place by Barton's bandage, but we found it was impossible to secure the posterior fracture with this. We then resorted to the sheet gutta percha splint, prepared by dipping it in hot water until it became perfectly pliant; and then we moulded it to the jaws, and letting it extend under the chin and well under the inferior border of the bone. After it was thus applied, and was cool, it was permanently secured by a bandage. With the splint below and at the side, with the teeth of the upper jaw above, and with the loop over the teeth, apposition was secured and all motion prevented. Liquid nourishment and mouth washes were ordered. In four weeks, the splints were removed, when union was found to have taken place without deformity. The wire loop stayed on six weeks without injuring the teeth or predisposing to abscess on union, or necrosis.

Correspondence.

Drysdale Cell—Explanation.

Mr. Editor,—In a letter published in the July number, 1879, of the *Maryland Medical Journal*, Dr. John Morris, of Baltimore, corrects a mistake I made in implying that Drs. Drysdale, Atlee and others considered the ovarian granular cell pathognomonic of ovarian dropsy. Not wishing to misrepresent any one, I write to show how the misinterpretation came about.

Dr. Drysdale, in chapter XXIV, page 450, of Dr. Atlee's work on *Ovarian Tumors*, says, "This ovarian granular cell, I consider as diagnostic of ovarian dropsy, and have seldom failed to find it in the fluid except in some of the earlier cases, where it probably existed but was overlooked from inexperience in the examination of these specimens."

Dr. Atlee, in chapter I, page 60, of his work, says Dr. Drysdale had drawings made of many more specimens of ovarian and other dropsical fluids, but they were accidentally destroyed. "The above, however, serve to prove that the free,

delicate granular cell is characteristic of ovarian fluid—it being only absent in three of the fluids examined; and in one of those the fluid was sent from a distance and not examined for a long time after tapping. In seventeen specimens of fluid obtained by tapping the abdomen in cases of ascitic and peritoneal cysts, a granular cell was found only in the fluid from one case, and differed from the granular cell of ovarian cysts in being adherent to a layer of coagulated albumen, and not appearing free in any numbers. Since the above observations were made by Dr. Drysdale, the subject has been well matured by very careful examinations, the results of which will be found embodied in his paper. In concluding this portion of the subject, I may remark, that I know of no other fluid whose physical, chemical and microscopical characters correspond with those of the fluid of an ovarian cyst; and hence, when a fluid drawn from the abdomen possesses the above characteristics, it may be considered diagnostic of ovarian disease.”

The probability or possibility of these cells existing in any other cystic fluids, as far as I can learn, has never been mentioned by either Drs. Atlee or Drysdale. I certainly was under the erroneous impression that they were peculiar to ovarian cystic fluids until I saw it reported that Dr. Christopher Johnston had found cells in other cystic fluids which bore a striking resemblance to the so-called ovarian granular cell; and I still think the writings of Drs. Atlee and Drysdale would lead one to suppose they thought it peculiar to ovarian dropsy. Thanking Dr. Morris for his prompt correction,

I remain very truly,

HUGH M. TAYLOR, M. D.

Richmond, Va., August 2, 1879.

In-Growing Toe Nail.—Dr. Fanning, in the *Medical Brief*, gives what he terms “a most happy plan of treatment” for this painful affection. He applies a solution of caustic potash, of the strength of $\mathfrak{z}\text{ij}$, to water, $\mathfrak{z}\text{j}$, twice daily. The granulations soon recede, and then he raises the nail and inserts a wedge-shaped piece of cork. This ends the trouble.

Original Translations.

From the German and French. By WM. C. DABNEY, M. D.,
Charlottesville, Va.

Researches in Osteo-Myelitis.—M. Colin read a paper on this subject before the Académie de Médecine of Paris some time since, which gave rise to a long and interesting discussion. We take the following conclusions at which M. Colin arrived from *Le Progrès Médical*, of July 5th, 1879:

Simple trepanning of the bones of a limb in young subjects or adults—the marrow being exposed freely to the air—does not cause any appreciable osteo-myelitis.

The introduction into the medullary canal of non-oxidizable stylets, as those of platinum, gold, or even of silver, causes only a simple non-suppurating osteo-myelitis; and the irritation shows no tendency to extend to the outer layers of bone or to the periosteum. If, however, oxidizable stylets be inserted, such as those of zinc or copper, causing at the same time both a mechanical and chemical irritation, grave osteo-myelitis will be produced, which will extend rapidly to the bone in its whole extent, and also to the periosteum and connective tissue. In this, however, there would be produced both an osteo-myelitis and a phlegmonous periostitis. In such cases, the bones of young subjects, or even of adults, may, in the course of some weeks, enlarge, lose their consistency even in the compact layers, and undergo considerable deformity. Furthermore, in phlegmonous periostitis, the periosteum may become injected and infiltrated over a large surface. In all cases, however, mechanical and chemical irritation seem to cause suppuration rarely; hence, one is led to the opinion that suppurative osteo-myelitis, as observed by practitioners, is due to certain special conditions of the organism which cannot be produced by experiment on animals. The prolonged contact of air seems to cause no injurious results. The application of putrid fluids to the bone marrow, though it is decidedly irritating, does not set up suppurative action, nor does it retard cicatrization to any sensible extent, if the tissues themselves be sound, and the constitution of the patient good.

Internal Constriction of the Bowel—Gastrotomy—Destruction of the Band—Cure.—An exceedingly interesting paper with this heading was read before the Société de Chirurgie on the 25th of June last by M. Terrier, and elicited a good deal of

discussion. We take the following abstract from *Le Practicien* of June 30th:

M. Terrier's patient was a young woman who was confined in December last with her third child. Her labor was perfectly normal, but she subsequently suffered from pains in the abdomen, which became much worse on the 28th of January in consequence of a fall, and she was forced to take her bed. On vaginal examination, the uterus was found slightly enlarged, and there was some fullness in the posterior cul-de-sac. Perfect quiet was enjoined, and in fifteen days the patient was able to go about her ordinary avocations.

On the 17th of February, the patient was suddenly taken with intense pain in the abdomen, accompanied by rigors. Her bowels had not been moved for two days, and not even gas had passed from them. Vomiting soon came on, and morphia had to be injected subcutaneously to relieve the pain. The pain and tenderness were greatest in the umbilical region. Applications of ice, leeches to the abdomen, and the administration of morphia gave temporary relief; but on the night of the 19th, the pain returned with great violence, and after consultation with M. Lucas Championniere, gastrotomy was decided upon.

The operation was performed with the usual precautions of Lister's method. When the abdominal cavity was opened, there was a discharge of sero-sanguinolent liquid. The visceral and parietal peritoneum were injected, and the folds of the intestine united by soft adhesions. These were separated as carefully as possible with the fingers, and the seat of the constriction was sought for. After a search of three-quarters of an hour, a band was found near the superior strait of the pelvis, which constricted the small intestine. This band seemed to extend from the sacrum to the sacro-ischiatic ligaments, and a coil of intestines was completely compressed by it. While examining the band, it broke without giving rise to any hæmorrhage. The intestine at this point was agglutinated to the posterior abdominal wall, and no effort was made to break up the adhesions. The abdomen was closed, and when the patient returned to consciousness, there was neither colic nor vomiting. The evening temperature was 40° C.; pulse, 125. In the night, there was a fall of temperature, and the next day the bowels moved freely. From this time she improved rapidly. On the 1st of May, she was slightly constipated, but this was promptly relieved by enema. The abdominal walls seemed strong, but for the sake of greater security a supporting bandage was used.

M. Desprez, in commenting upon this case, said that the patient was not only relieved of this constriction, but cured of the peritonitis also. Some surgeons, and among others M. Trebat, had heretofore proposed to open the abdomen and bathe the intestines in very grave cases of peritonitis, and this case would tend to encourage this practice.

M. Lucas Championniere observed that the carbolic acid, which was freely used, had produced no evil results in this case, although the bowels were kept for a long time outside of the abdomen in a "compress" impregnated with a solution of the acid. As to the peritonitis, he said that he had for a long time been in the habit of operating for ovarian tumors when the peritonitis was of a high grade, and Spencer Wells had even claimed that better results were obtained under these circumstances than when no inflammation was present.

M. Duplay said that this case would have a decided effect in popularizing the operation of gastrotomy in cases of internal strangulation; although in the only cases (three in number) where he had operated, the results were unfavorable. One of the greatest difficulties was to find the cause and seat of the obstruction; he had known the large intestine to be strangulated.

M. Berger thought that the adhesions between the intestine and the posterior wall of the abdomen, which existed in this case, should have been broken up, for they might give rise to similar attacks hereafter.

M. Tillaux said that he had heretofore preferred enterotomy to gastrotomy, chiefly because the former was the choice of Nélaton. But in the presence of the recent successes which had been attained, and the great change which the medical and surgical treatment of abdominal injuries had undergone, he found it necessary to change his opinions on the subject. Enterotomy, indeed, was far from giving satisfactory results, and of six cases on which he had operated, only one had resulted satisfactorily. This was a cancerous woman, who survived the operation two years, but finally died of the cachexia.

M. Hoiël said that Nélaton had four successes in six operations, one of the patients being now living and an officer in the army.

Hypodermic Injections of Iron.—In the *Allg. Wiener Med. Zeitung*, for July 1st, is an abstract of a paper on this subject by Wyschenski. He refers to the fact that this mode of administering iron was originally proposed by Huguenin, who

recommended the pyrophosphate of iron with citrate of ammonia for the purpose. Three grains of this were given in solution in water—a little albumen being added to prevent irritation. The injections were made into the back once a day, and were followed by excellent results. In three cases only out of eighty in which the treatment was practised, was there any swelling, and only once did an abscess result. The injections, indeed, were very soothing. One patient, who was suffering with cancer of the stomach, and who, in consequence of repeated vomitings, had become so weak that he could not leave his bed, felt so much better after five injections that he walked a short distance without help. Another person, who was suffering from chronic ulcer of the stomach, and who had lost a good deal of blood, gained three and a-half pounds in weight after six injections. In a case of anasarca from heart trouble, there was a very marked increase in the amount of urine discharged after three injections, and a marked improvement in the condition of the patient. It was found highly serviceable also in hysteria complicated with anæmia. In all cases, indeed, there was a decided improvement in the general condition as a result of the injections of iron. The pulse was, even an hour after the injection, fuller and generally rather more frequent. As a result of his investigations, the author concludes that the administration of iron in this way is capable of much more extended use, and that it acts much more promptly and energetically than when given by the mouth. He recommends the same salt and the same dose employed by Huguenin. The liquid dialyzed iron, recommended by Da Costa, he does not think advisable, as even when used in very small quantities (2 to 4 drops), mixed with water, severe and long-continued pain was produced, which was followed by redness, swelling, and the formation of an abscess.

Favorable Action of Ammonio-Sulphate of Copper in Neuralgia of the Fifth Pair of Nerves.—Dr. Féreol (*Bull. Gener. de Therapeutique*, No. 8, 1879, and *Rundschau*, June, 1879) in this paper reports four cases of neuralgia of the trifacial in which he used the ammonio-sulphate of copper with favorable results. The dose employed was from two to five grains dissolved in water and syrup of orange peel, in the course of the twenty-four hours. Should it irritate the stomach, a part should be given at meal times, and the rest in the intervals. It may be given in a daily dose of one and a-half grains for twelve or fourteen days.

Proceedings of Societies.

British Medical Association.

The forty-seventh annual session convened in Cork, Ireland, August 5th, 1879. Attendance about 2,000. Dr. R. W. Falconer, President for the year, in the chair. He was accompanied by Dr. D. C. O'Connor, of Cork, President-elect. Mr. Frowke, Secretary, read the minutes of the last general meeting, which were approved.

The retiring President, Dr. Falconer, in resigning the chair, made some appropriate remarks relating to developments of the Association. He said that at the Dublin session the membership amounted to 3,000; now it is 7,800. Besides, since the former meeting in Ireland, four branches of the Association have been established, and the numbers of those branches have formed a considerable addition to our total number. After referring in an incidental manner to some of the subjects that would come before the present session, he gracefully introduced the incoming President and retired.

Dr. W. K. Sullivan, President of Queen's College, Dublin, stated that that College had conferred on both Drs. Falconer and O'Connor the honorary degree of M. D.

On motion of Dr. Waters, seconded by Dr. Carpenter, in complimentary speeches, thanks were voted Dr. Falconer for the able discharge of his duties as President.

Dr. Alfred Carpenter read out the following list of distinguished foreign visitors present: Profs. Charcot, Ball, Drs. Gallard, Bonafont, Sowerly and Gueneau de Mussy, of Paris; Drs. Herschby, Weber Liel and Madton, of Berlin; Dr. Giacinto Paechiatti, of Turin; Dr. Coodes, of Geneva; Drs. Lewis A. Sayre, Geo. M. Beard, E. C. Seguin, Gray and Hodgins, of New York; Dr. Yandell, of Louisville; Drs. Lawrence Turnbull and Da Costa, of Philadelphia, and Dr. A. B. Palmer, of Ann Arbor.

The President, Dr. O'Connor, in beginning his address, expressed his thanks for the honor he had received in being elected the chief officer of the Association. He then pointed out some circumstances of interest associated with the locality of this meeting. The surroundings of Cork, added to the mildness of the climate, makes the vicinity an agreeable as well as a valuable winter resort. In this character, it is associated with Queenstown and Glengarriff, which has re-

cently acquired a high repute. The sanitary condition of the city is exemplified by the low death rate, and the gradual disappearance of typhus, which, in the last century, appeared every seven years; in the early part of this century every ten years; and now, since the famine fever, we have had but one outbreak of any severity, and that nearly fifteen years since. We owe this to the admirable supply of pure water, and to an extensive system of sewerage, provided by the corporation.

After referring to some historic parts of the city, and some of its eminent citizens in other days, he said that within a very few years, ten different asylums have been established—for orphans, for the aged, or those who have strayed outside the confines of morality in early life. Five new hospitals have been opened, in addition to those already in existence. This has emanated from the spontaneous outpouring of Christian charity. Happily, the barriers that separated the different religious denominations have been removed, and seeing each other from a nearer point of view, men have found good citizenship and brotherly love where they expected to meet aversion or hostility. The same good feeling has been manifested of late in the courtesy shown towards each other by the different sections of the Corporation—and may we not believe that it is owing to such teaching and example from the affluent, that serious crime is almost unknown in this city, and that for more than half a century no High Sheriff was under the necessity of carrying out the extreme penalty of the law within this borough.

The speaker next proceeded to speak of the composition and objects of the Association, and the aims of the profession generally.

Dr. Carpenter, President of the Council, read the annual report. Members admitted during the year, 650; deaths, 67; resignations, 172—leaving total registration, 7,810. Receipts, £12,433 4s. 7d.; payments, £12,939 9s. 9d. Still there is a balance on hand of £769 16s. 10d. Last year was exceptional, as the cost of adapting the office premises to business requirements, the larger number of journals printed owing to the increase of membership, legal charges for two years, larger expenses of committees, etc., rendered the expenditures unusually heavy, and part of this will not necessarily recur.

The evening was spent in entertainments of various kinds.

During the *second day*, Mrs. Garret Anderson, the only lady member of the Association, was in attendance.

On nomination by Dr. Carpenter, Cambridge was selected

as the place for the annual session in 1880, and Prof. Humphrey was elected President.

Address on Medicine.—Dr. Alfred Hudson, Regius Professor of Physic in the University of Dublin, presented the address. In referring to the discovery of auscultation by Auenbrugger, he mentioned that the idea of the *stethoscope* was suggested to Laennec Gobsewing by some children playing in Paris—holding their ears at opposite ends of a beam of wood, and conveying from one to the other the sound produced by tapping on one end. Laennec was not slow in turning what he observed to practical account, and the result was the discovery of the stethoscope.

In the Section on Public Medicine, the discussion on *The Influence of Drinking-Water in Originating or Propagating Enteric Fever, Diarrhœa, Diphtheria and Scarlatina* was opened by Dr. Andrew Fergus, of Glasgow. Until recently, Glasgow was supplied with river water, which contained the drainage of the towns higher up. In 1843, cholera prevailed universally in Glasgow. No district was specially exempt from the disease. In 1854, the south side of the city, inhabited by the working population, had got a pure supply of gravitation water, and it was remarked at the time that the south side suffered very little from cholera. There was no registration at that time, and they could not bring that point to the touch-stone of figures; but the experience of all medical men at the time was, that though there was not complete exemption, there was a very marked exemption from the disease in the south side, which had the supply of pure water. By the year 1866, all Glasgow was supplied with pure water, and though since then they had imported cases of cholera, though the poison was there, it did not take any hold on the city whatever. There was also a marked diminution in the prevalence of cases of diphtheria since Glasgow got a supply of pure water. He remembered once going to a fine house in a beautiful country, and three of the inmates were down with typhoid fever, and on investigating it he found that the cause of it was impure well water. In another instance, he was told by a lady that her family had never been well since they removed to a very large house; and on making inquiries, it turned out that there was a cesspool with an open grating in close proximity to the well which supplied the house with water. The same thing occurred in cases of diphtheria, and he had found many cases which were clearly traceable to impure water. On the return of several families to Glasgow from a watering-place which has been

called the Brighton of Scotland, many of the inmates were suffering from typhoid fever; and an examination of the wells in the vicinity of the place being made, it was discovered that every one of the twenty-eight wells showed evidences of organic pollution, when Dr. Fergus employed the only test he could—that of the Nessler solution. He would counsel people to have the water attached to a house always tested before taking the house; and if the water was at all suspected let it be distilled. Water contaminated by sewage was not unpleasant to drink for the reason that the organic matter decomposes and the process of decomposition produced chemical action, which rendered the water sparkling and cooling, and almost pleasant to the palate. Not alone should all communities be supplied with pure water, but all sources of impure water should be cut off. Dr. Fergus concluded by saying that in some cases it was hard to overcome the partiality people had for old practices, and he related how, in the case of a favorite well in Glasgow—the closing up of which would have caused an outbreak—the authorities got over the difficulty by turning the pure Loch Katrine water into the well, and the people went and drank out of the well as before. [Laughter and applause.]

Dr. Alfred Carpenter, President of the Council, read a paper on the **“Dual Requirements of Enteric Fever, and the Fallacies Based upon a Narrow View of the Germ Theory.”** Some writers assumed that if an enteric germ found admission into a pure water supply, it retained its vitality. He pointed out the fallacies contained in this, as also in the beliefs which were often expressed that there was no limit to the distance to which the contagion might not be transmitted underground. He also believed that filtration would not alter the contagious nature of the particles, and also that neither microscopical or chemical analysis were able to prove the absence of such contagious particles. Those fallacies had been propagated in districts supplied with water from deep wells. It had been stated that zymotic diseases of every kind which has arisen in these districts have been caused by the water alone, independently of imported contagion, or local nuisances. The fallacies were used for the purpose of assailing the character of deep well water, and for resisting the establishment of water works, which were often urgently required. It was argued by the authors of the fallacies in question, that water which might have been polluted by mischance or accident was not fit for public supply, because they said there were no safe provisions in nature for restoring it

to a state fit to drink. Dr. Carpenter brought forth evidence, based upon personal experience, as well as the observations of others, to show that these ideas were dangerous fallacies. He also pointed out that two causes were generally at work in the establishment of an epidemic of enteric fever. First, there was a marked departure from the first sanitary law, by means of which the house of the victim was exposed to sewer contamination from defective sewers; and secondly, that the water services were in immediate communication with the sewer system, by means of which an interchange of material took place, and thus typhoid germs gained admission. He was of opinion that germs of typhoid would abort or fail to set up irritative fever, if the constitution in which they are planted has not been reduced in power by exposure to sewer decomposition, or to repeated doses of the morbid matter. He showed there were conditions in the nature of things which tended to purify streams under ground, as well as atmospheric air. The sum of his conclusion was, that an occasional enteric germ might be in water; but if that water was pure, it could not multiply there, whilst if the body of the recipient is healthy, and has not been exposed to miasms from decomposing animal matter, such as escape from common sewers, it will abort, and no fever will be likely to rise.

Dr. J. Lane Notter next read a paper on the **Value of Chemical and Microscopic Analysis in Relation to the Question** treated of by Drs. Fergus and Carpenter. He said that chemical analysis has been the subject of much criticism, and until the poison of enteric fever is isolated, he claimed for water analysis the same consideration as shown in similar causes. It was true that chemical analysis could not specify the causes of these diseases. It could only tell them of certain conditions to which it was collateral. They could, by means of chemical analysis, tell the nitrogenous compounds in water, and where those existed they must take heed lest the specific germ be present. If the *materies morbi* of those diseases had a habitat amid the common putrefactive changes of dead organic matter, it was hardly possible for them alone to contaminate water without also introducing an element with which their development is inseparably bound up, and which would be amenable to the test of chemical analysis. In the aerial, in the aquatic, in the marine regions, under every condition throughout the globe, the laws of life for plant and animal use are the same. The presence of a plant or animal in drinking-water was no more an evidence of impurity than was the existence of an oak or an elephant on

land. On the contrary, the higher forms are a favorable sign; living cyclops are seldom or never to be found in bad water. There were certain forms of life associated with bad water, and in making an analysis those should be carefully sought for. There was a remarkable immunity from animal life in highly ferruginous water. Indeed, seldom or ever they found any, and that pointed, perhaps, in some degree to the advantages to be derived from spongy iron as a filtering medium. Again, chemical analysis was limited in its powers, and might, indeed, mislead. Every chemist knew that the composition of dextrine and starch were the same—they were isomeric bodies. Given dextrine and starch, and reduce them to their primary elements, chemical analysis would not *differentiate* between the two; but by the aid of the microscope the profession were at once enabled to say which the substance presented to them was. So in relation to diseased germs, their separate elimination would seem equally to baffle our powers of chemical elimination, by which we are only able to arrive at some secondary conclusion, such as albuminoid ammonia, or some other product of some secondary combination. The only chance of gaining any information would be by an accurate and scientific knowledge of microscopical appearances as well as by chemical analysis. The latter will point out the main character of the matter, and it was by means of the former that they would be able to *differentiate* between a harmless dermid, or an infusorium of evil omen.

Dr. Norman Kerr read a paper giving some typical cases of enteric fever, diarrhœa, scarlatina and diphtheria arising from drinking-water.

Dr. Martin (in the absence of Dr. Ballard) read that gentleman's paper, giving some facts illustrative of the spread of these diseases.

Surgeon-General Crawford, Dublin, coinciding as he did with regard to the remarks made as to the importance of a pure water supply, and as to the great factor impure water was in promoting the diseases referred to, still found from experience that more than once several forms of fever, typhoid, diphtheritic, and others, had arisen from other causes than impure water. After five years recently spent in India, he had discovered that; and he did not mention it with the view of contradicting what the gentlemen who had read the papers had put forward, but for the purpose of inducing them and others to follow further the source of this, holding as he did that water alone would not account for the spread

of contagion in all cases. He remembered an instance of a cavalry regiment (11th Hussars recently returned to this country) which, during its service in India, had been visited with three different outbreaks of typhoid fever. After being three years in the country, the regiment was attacked with typhoid, when at a station called Morar. Having removed from this, typhoid again broke out in the regiment, and when the 11th Hussars came to Umballah, a third attack of typhoid visited them. He was only with the regiment at Umballah; but he took counsel with the medical officers who had been in attendance on the troops at the first stations, and they could come to no other conclusion than—whatever the cause of the typhoid outbreak might be—it could not be traced to contamination of the water by sewage in any of the three localities. He believed that such diseases were conveyed to individual from individual by other means than water. He thought that investigation should be made to determine from what causes other than sewage contamination diphtheria and typhoid might arise.

Dr. Nachar, of Birkenhead, held that examination of water by the microscope was a matter of even more importance than chemical analysis—as he believed the chemists had had their own way too long in this matter. The morphological impurities could undoubtedly be better determined by the microscopical examinations than by the chemical. Furthermore, he thought the morphological impurities in the air should be determined and set out, instead of taking the carbolic acid and the other impurities in it.

Dr. Taylor and Dr. Littlejohn also spoke on the subject.

Dr. Fergus said he and the other gentlemen who had addressed the meeting, did not, by any means, wish to indicate that those diseases might not arise from other sources of impurity than contaminated water. But he held that the diseases under discussion arose almost invariably by taking into the system, by air or by water, human excrement in a state of decomposition. The question was, how those noxious gases were conveyed into the houses, so as to cause an outbreak of fever. It got in in several ways, but the general opinion was that it was by the tension of the sewers, or by the suction powers of the openings into the drains, that it was conveyed into the houses. He was extremely puzzled for a long time to know how the air got into the houses. What led him to find it out was observing the decay in leaden pipes in houses. The lead becomes affected on the outside and not on the inside—on the upper surface where

there was no water, and at places where no water could lodge. His opinion as to one of the means by which those foul gases got into the houses was this: When they could not escape through the volume of water in the ordinary sanitary arrangements of closets, they were driven back through the supply pipes to the cistern, which in many cases supplied the house with water for dietetic purposes, and hence the cause of typhoid fever in many cases that were rather difficult to trace.

The President said, as far as his experience went, he knew cases of typhoid fever being caused by the gases being absorbed into exposed cisterns after passing through pipes, thereby contaminating the drinking-water for the house. He remembered on one occasion attending six members of one family affected with typhoid fever, and the only cause to which it could be traced was the one that Dr. Fergus suggested. In Dublin they had much the same sort of water as they had in Glasgow as regards the chemical constituents; yet typhoid fever was steadily on the increase in Dublin. That, in all probability, would point to the fact that typhoid fever could be traced to other causes than the supply of impure water alone. As to the relative properties of soft and hard water in carrying disease, many persons believed that soft water was dangerous from the facility with which it took up the diseased particles caused by decomposition, and that hard water was comparatively free from such a property.

Third Day.—**Prevention of Blood Poisoning in the Practice of Surgery** was the title of the "Address in Surgery," by Mr. Wm. S. Savory, F. R. S., Surgeon, and Lecturer on Surgery in St. Bartholomew's Hospital. Blood poisoning was undoubtedly the chief evil which wasted upon the surgeon's work. It hovered over every operation; it was not yet a thing of the past, but much has of late been done in this direction. No one could tell how many lives were in former times sacrificed by blood poisoning in its comprehensive sense, for the nature of the mischief being unknown, it was in those times set down to various causes. He used the word "blood poisoning" in its comprehensive sense to express the sum of the efforts produced by the introduction of matter charged by the action of septic poison into the blood. By septic poison he meant matter capable of producing or promoting putrefaction. There was a confusion in the current use of the phrase antiseptic surgery. This should mean the principle which arrived at the securing of healthy wounds, and these then repaired as speedily as possible by the most

scrupulous cleanliness not only in the common but in the surgical sense. Thus understood, anti-septic surgery ought to be simply equivalent to good surgery. But antiseptic surgery, as commonly understood, implied the liberal employment in practice of special agents, known as antiseptics, and in this sense again all surgeons now practised it. Finally the term was now most commonly used to explain what was more precisely known as Lister's method of dressing wounds. Dr. Savory read a table which he had prepared, showing the statistics of blood poisoning after operations in St. Bartholomew's hospital for three years. From this it appeared that after 1,235 operations, the number of deaths from blood poisoning was eighteen. The best results had been obtained by the simplest means. They aimed at the most scrupulous cleanliness. They watched very carefully the actual state of the wounds, and they used antiseptics of various kinds very freely. With cleanliness, they attached the highest importance to rest. They disturbed wounds as little as possible during the process of repair; they were most jealous of the state of the atmosphere of the wards; ventilation was only effected by open windows and large chimneys. They avoided carefully any tendency to overcrowding of cases of wounds in the same ward, and each patient had from 1,100 to 1,400 cubic feet of space. They attached the greatest importance to the state of the health and the general condition of the patient before operation, and they never, when they had choice and opportunity, performed an operation without previous inquiry in this direction. Dr. Savory condemned the use of drainage tubes in wounds unless in exceptional cases. It should always be remembered that they were foreign bodies in a wound. They irritated and provoked suppuration and formation of fluids. That wounds did at length close in spite of this treatment he was well aware; but they would all heal more quickly and kindly without disturbance, if they were simply closed in a way which he explained. He spoke highly of the value of common bread poultices, carefully made and renewed at proper intervals of time. With regard to Lister's plan, which aimed at excluding blood poisoning by the rigid exclusion of living germs, judging the plan by facts actually ascertained, there were, he said, no trustworthy statistics to show that without the results obtained under Lister's method was much in advance of those obtained by other methods.

In the Public Medicine Section, Dr. John W. Moore, of the Cork Street Fever Hospital and House of Recovery, Dublin, opened the discussion on the subject of

How are we to deal by Isolation or Otherwise with Convalescents from Acute Infective Diseases, so as to Limit the Spread of Disease? From his experience, he had come to the conclusion that the only way to limit the spread of contagious disease was by a complete system of isolation between the sick and convalescent, and he used the term "isolation" in its most extended sense. The convalescent must be kept separate until the days of his purification were accomplished, and in the words of the old Mosiac law, he might say of the convalescent patient: "He shall dwell alone; without the camp shall his habitation be." Nor would it suffice to isolate the convalescent himself—his wearing apparel and other possible *fomites* must also be prevented from doing harm by thorough disinfection. Sometimes, indeed, nothing short of destruction by fire could neutralize the danger. In the twelve months ending March 31, 1879, upwards of 1,500 small-pox patients passed under his observation in the epidemic wards of the Cork Street Fever Hospital. Often and often was he an eye witness of the untoward effects of a prolonged sojourn in the necessarily tainted air of the hospital. Abscesses, bed-sores, diarrhoea, pleurisy, and other diseases were sequels of the disease in too many instances, and he could not help thinking how different it might have been had the sufferers been removed in good time to a purer air. The surroundings in even the best managed epidemic hospital could not fail to exercise a depressing influence on the minds of patients who are recovering from illness. It should not be forgotten also that beds were being occupied by the convalescent, which might probably be urgently required at the very moment for the patients in the earlier stages. At present he believed that in Ireland neither suitable nor adequate places existed for either hospital or private patients recovering from infectious diseases. Dr. Moore exhibited a plan of a convalescent home, and recommended that it should be in a rural position about a mile away from the city, and situated in a plot of from 10 to 12 acres. And with regard to private patients, he suggested that convalescent homes should be built and regulated on the plan of private lunatic asylums.

Dr. Francis Vacher, Birkenhead, advocated the establishment of convalescent hospitals, if feasible, in the way Dr. Moore suggested; but the difficulty was the want of money. In the present circumstances he would keep the patients in hospital until perfectly free from infection, and for that purpose he would set some special wards apart. He believed that the Government would be constrained to take action in

this matter, because it was as much a matter of necessity to abridge the liberty of the convalescent patient (until thoroughly recovered) as it was to deprive of liberty any other person whose presence was calculated to be an injury to society.

Dr. Notter, in the absence of Dr. Ransome, read a portion of the latter gentleman's paper. He did not go in for quarantine in cases of convalescent patients, but he recognized the importance of pure water and good drainage in the case of typhoid fever. He considered that diphtheria was only slightly infectious, and that complete isolation should be resorted to in cases of scarlet fever only. He was not in favor of building large convalescent hospitals for infectious diseases, as in his opinion small hospitals, with well ventilated wooden walls, were the best kind of building to be used for such a purpose. In private cases Dr. Ransome advocated Dr. Budd's plan, which was simply anointing the body with some camphorated or olive oil.

Dr. Pacciotti, Turin, did not agree with Dr. Ransome's view that scarlet fever was the only infectious disease, because measles were infectious, so was typhoid fever, scarlatina, and even diphtheria.

Dr. Stewart said that thirty years ago he felt that the great desideratum was a convalescent home for patients suffering from infectious diseases, and even chronic diseases, in order to effect the speedy restoration to health of the patients. In order to erect those buildings, he thought application should be made to the Government for loans, and placing them under the poor law authorities, who could appropriate portion of the rates to their support, or strike a special rate for the purpose.

Dr. Darby, of Bray, suggested that as there were some difficulties in the way of convalescent homes, a committee of the Association should be appointed to consider the whole subject, and define at what period of convalescence they would consider a patient free from infection. He pointed out the difficulty of inducing a noble lady to send her child, who may have been affected with infectious disease, to a convalescent home, or a noble lord sending his wife there; but as to the question of expense, he thought that difficulty could be easily got over.

Dr. Vacher said he had recently visited the Fever Hospital in Cork, and he found that out of 44 beds for acute patients, 27 beds (in a different room) were set apart for convalescents, and he thought that a very good arrangement.

[TO BE CONTINUED.]

Analyses, Selections, &c.

Soft Rubber Spring-Stem Pessary for Uterine Flexions.—

We make the following synopsis of a very valuable paper read at Rome, Ga., April 17th, 1879, before the Georgia Medical Association, by Henry Fraser Campbell, M. D., Professor of Operative Surgery and Gynæcology in the Medical Department of the University of Georgia, at Augusta, Ga.

At the meeting of the Association in 1875, he advocated the postural pneumatic method of reducing uterine versions and prolapsus. He still regards this as the only philosophic and effectual method of replacement in the several forms of uterine luxation. But in the class of uterine *distortions*, to which flexions belong, the treatment required is entirely different. The trouble is intrinsic, and the indications are, not to change a malposition, but to correct a deformity of the organ. While the stem-pessary commends itself as the most efficient and direct, the many evils, not to say the fatality, which have attended its use have finally resulted almost in its expulsion from the armamentarium of the gynæcologist. The fatal results by Velpeau, and his consequent condemnation of the stem, together with the frequent disasters experienced by others, have been the principal causes of its exclusion from practice.

Dr. A. Fredrik Eklund, of Stockholm, in 1875, published the most valuable suggestions as to the pathology and treatment of uterine flexions. With the late Dr. Martin, he does not regard these distortions as simply mechanical bendings, caused by superincumbent weight of the heavy body and fundus upon the softened neck; but attributes a dynamic instrumentality to the longitudinal muscular fibres, similar to the altered and unequal muscular action which effects the deformity in club-foot and other analogous distortions. The atonic muscular fibres of the convex side give over the softened and passive neck, to the action of the actively healthy muscular fibres on the concave aspect; and by this means the flexion is accomplished, while the continuance of this action renders it permanent. Hence he regards one of the important indications of treatment to be stimulation and restoration of tone to the atonic fibres, whereby the flexed neck or body may be brought back to its natural contour, and the continuity of the canal restored. To accomplish the desired result, he prefers, decidedly, the stem-pessary, both because it acts as a stimulant to awaken the proper tone of the par-

alyzed fibres, and also as an internal splint, acting orthopedically in restoring and giving permanence to the proper contour of the distorted organ. He tabulates 25 cases in which permanent cures resulted from the use of the stem under the strict and systematic rules given by him for its application.

Deeply impressed by these views, and finding but little satisfaction from any of the usual methods recommended, Dr. Campbell has for some years endeavored to secure, as near as possible, the advantages of the stem-treatment without incurring the risks of its actual application. He has repeatedly accomplished straightening of the distorted neck with sponge and sea-tangle tents, and in several instances conception has resulted. Beginning with sponge tents made with a decided curve, little or no irritation was produced; and as the canal became straighter, the curve could be lessened until perfectly straight tents could be used, after which the distortion would entirely disappear. Then if pregnancy occurred, permanent cure would result.

As an additional force in the curved sponge-tent treatment of flexions, Dr. Campbell has thought well of, though never used, the enclosed watch spring, suggested, he believes, by Prof. Ellerslie Wallace, of Philadelphia; but even in this, the objectionable element of the sponge in contact with the mucous membrane of the uterus restricts its value, and renders its long application dangerous and undesirable.

Dr. Campbell thus summarizes the results of his reflections as to the conditions and causes acting upon stems, which render their application so frequently disastrous, and not seldom fatal.

1st. Even in health, that is, in the undisturbed womb, the mucous membrane of the body and neck is of a most sensitive character, and liable to the awakening of inflammation. Especially does it resent any mechanical aggression, such as the introduction of sounds, tents or probes, into the cavity of the womb.

2d. In ante-flexion and retroflexion, especially to the degree of stenosis, the natural sensitiveness of the cavity is greatly exaggerated. In nine cases out of ten, there is endometritis. It is the opinion of many that a pre-existing endometritis, and perhaps some degree of metritis also, is a frequent cause of the flexion.

3d. In this condition of the lining membrane, and perhaps of the parenchyma of the womb, extension of inflammation to the entire structures of the organ, and to the peritoneum and pelvic cellular structures, could very readily be provoked

by the forcible introduction into, and retention in the womb of any of the ordinary forms of stem-pessaries.

4th. The forms and materials of all the stem-pessaries heretofore, and at present, used for the correction of flexions are entirely unsuited for introduction into the womb while in a state of flexion, especially when any degree of metritis or even endometritis is present. Both in form and in material, they are most dangerous because we cannot introduce a straight, stiff, hard rod into a curved, and still less into an angular canal—which doubtless has often been done—*without injurious violence to the inner surface and structures of the womb*. We curve the probe even for an examination in such cases; what are we to expect when the straight, unyielding stem is thrust in to remain as treatment!

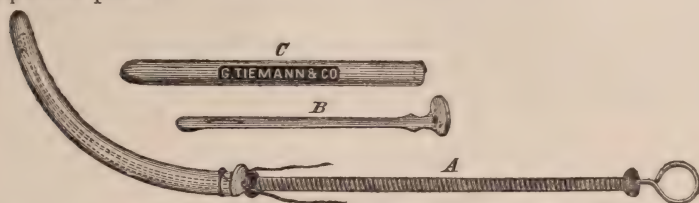
5th. When any of the ordinary or now existing stems have been thus forced into the womb for the correction of flexions, *the treatment is begun by inflicting a very serious traumatic injury* (bruising and contusion) upon the uterus. In addition to this, the sudden straightening, and continued contact of the hard and resisting material with the tender surface still further advance and hurry on the process of uterine and pelvic inflammation which had been produced or aggravated by the violent and forcible introduction.

6th. The very name of "pessary" as applied to the stem in common with the class of supporting pessaries, often misleads both the medical attendant and the patient, as to the amount of care and quietude necessary during the use of the former, as compared with conditions in which the latter are used. The one is a surgical appliance to somewhat forcibly hold straight a flexed womb in opposition to an acquired tendency to an abnormal direction; and for some days at least, perfect quiet of body should be observed; while the other is simply a support to a descended or tilted womb, admitting of greater latitude of motion, and the taking of more extended exercise, than before it was applied.

With the above considerations constantly abiding in his mind, Dr. Campbell has for years given, to all sponge-tents used in the treatment of flexions, a considerable curve with the fingers just before their introduction. Of late years, he has his tents for this purpose *made* with a very decided curve in order that their introduction may be rendered easy and no risk run of traumatism in the tender organ to be treated.

In the instrument Dr. Campbell now presents, he has endeavored to secure all the advantages in the cure, of easy and innocuous introduction; and also those of softness and plia-

bility of material with yet sufficient strength to act as a splint in maintaining straightness. It consists of three distinct and separate parts:



A.—The soft rubber stem and spring prepared for introduction. B.—Shows the spring separately. C.—The rubber cap or hood.

1st. An applicator upon the plan of Emmet's, or the sponge-tent applicator modified for this purpose, with a spiral wire protrusor which can be pushed beyond the curved end without injury if any degree of care be given to this work.

2d. A spring which can be made of any degree of weakness or resiliency, and which is to be slotted on to the curved end of the applicator, and

3d. A piece of India-rubber tubing, similar to Nélaton's catheter, closed at one end, which is to be pushed as a cover over the spring as adjusted on the applicator.

A string should be applied through the two smaller holes of the plate at the proximal end of the spring, in order to withdraw the spring from the uterine and cervical cavities whenever necessary. Another string or thread (of different color) should be attached to the rubber tube in order to withdraw that too, should it be desirable. The present specimens were made by Messrs. Geo. Tiemann & Co., of New York, from models not altogether perfected, which will answer to give the correct idea of the object intended.

The spring may be of any degree of strength or feebleness; or after the introduction of the tube alone by the applicator, a very flexible piece of whalebone or gum-bougie may be pushed in, to give the stem just the slightest degree of resiliency to correct, however gradually, the aberration in form of the inflamed or irritable womb; or possibly the *simple presence* of the tube itself may be sufficient, upon the idea of Eklund and Martin, to awaken the tonicity of the relaxed fibres which had been instrumental in the flexion. When once the tube has been placed, any kind of *stiffner* may be safely introduced without any danger or fear of injury to the mucous membrane of the womb. It is both the *guide* and the *guard* for stems of any kind, whatever we may choose to use in correcting the distortion.

In the majority of cases, the previous introduction of a curved sponge-tent will be required to dilate and slightly straighten the angular canal, in order that the curved spring and its soft-rubber cover may enter without the exercise of force. A ring pessary may be required sometimes, to sustain in cases of prolapsus, and possibly a cotton tampon may add to security of retention for the stem.

Book Notices, &c.

Manual of the Principles and Practice of Operative Surgery.

By STEPHEN SMITH, M. D., Surgeon to Bellevue and St. Vincent Hospitals, New York. Boston. Houghton, Osgood & Co., 1879. 12mo. Pp. 689. (From Publishers.)

The *Handbook of Surgical Operations*, by Dr. Smith, issued in 1862, fulfilled a most important special mission. The present volume, it may be said, is a second greatly revised and enlarged edition of that *Handbook*, giving the "general operations in surgery—the organs of special sense being excluded." While there can be no question as to the important authority which attaches to everything surgical emanating from Dr. Stephen Smith, we do not think there is a special demand at this time for the book he sends out. It is neither a systematic work on surgery nor a monograph; nor is the work complete in describing all of the many usual operations in surgery, exclusive of those to be performed on organs of special sense. Under the head of preparatory treatment of the patient to prevent surgical shock after many operations, an important omission consists in failing to mention the value of quinine, which should be given several hours before the operation is begun. This recommendation of the lamented Easley, which is sustained by the experience of Prof. McGuire and others of the eminent Southern surgeons, is worthy of permanent prominent record in such a book. Nor do we find even a reference to Prof. Greenville Dowell's operation for the radical cure of hernia—now conceded by all who know the operation to be simpler, safer and surer than any other operation for the radical cure of hernia yet announced. Dr. W. D. Hooper's acknowledged great improvements to Dr. Sayre's instrument for making extension of the knee joint in cases of chronic inflammation of that joint receives no mention.

But having said perhaps as much as we ought as to the

defects in the design of the book, as they appear to us, and having indicated the fact of omissions of some important operative suggestions, etc., we should not leave the reader without adding that all that is in the book is of practical importance to the surgeon. And we would advise those whose means would justify the purchase, after providing themselves with one or two standard systematic works on surgery, to possess themselves of it. The style of writing is concise and clear; the descriptions are graphic; and the numerous woodcuts are of incalculable value to any such book. The publishers have done their part well. A full index is appended.

Hints in the Obstetric Procedure. By WILLIAM B. ATKINSON, A. M., M. D., Physician to the Department of Obstetrics and Diseases of Women, Howard Hospital, Philadelphia; Lecturer on Diseases of Children, Jefferson Medical College, etc. Philadelphia: D. G. Brinton, 1879. 16mo, Pp. 118. (From Publisher.)

These "Hints" first formed the subject of an address before the Philadelphia Medical Society. The reprints being exhausted with still a demand for them, the author made some revisions and additions, and published the first edition only a year or so ago of the "*Hints*." The second edition now before us is a thorough revision of the first, and concisely states many useful facts not included in the first edition. It is wonderful how much of the real needs of an accoucheur can be supplied by so small a volume. But of course there are important oversights. Thus there is no mention of the great value of quinia in the treatment of after-pains. In speaking of the use of forceps, however, he gives some excellent plain common sense advice. "The first blade to insert is that one which, when both are inserted, would be next to the perineum." It would be well for the practitioner, as he is waiting in "the next room" for his patient to come up to time, to have this handy book with him to refresh his memory, etc. It is a first-rate small book.

Pocket Therapeutics and Dose Book. By MORSE STEWART, Jr., B. A., M. D. Second edition. Revised and Enlarged. Detroit, Mich. Geo. D. Stewart. 1878. 24mo. Pp. 263. Cloth, \$1. Morocco, \$1.30. (From Publisher.)

This is a most useful little book for every physician to carry with him in his pocket to serve in cases of emergency. It contains a classification and explanation of the actions of medicines; the minimum and maximum doses of drugs in

Troy weights, with their equivalents in the metric weights; index and definition of diseases, with appropriate remedies; genitive endings of all medicines and preparations given in italics; index of common and pharmaceutical names; classification of symptoms; poisons and their antidotes; useful hints to the prescriber; and a list of the abbreviations used in prescriptions. Since its reception, we have constantly carried the book on our person in making professional rounds, and there has scarcely been a day that we have not found it of material service.

Ophthalmic Out-Patient Practice. By CHARLES HIGGINS, F. R. C. S., Ophthalmic Assistant Surgeon Guy's Hospital, etc. Second Edition. Philadelphia: Lindsay & Blakiston. 1879. 16mo. Pp. 116. Cloth. Price, 60 cents. (For sale by Messrs. West, Johnston & Co., Richmond.)

This is a capital little book, just such a one as was needed by the general practitioner as a convenient guide in treating eye diseases. Without special technicalities, and in a very condensed shape, the author has given us accurate pictures, with the appropriate treatment of the commonest form of eye trouble. He does not enter into such minutiae of their pathology and therapeutics as would carry us into the domain of the specialist, and this makes the book all the more valuable as a pocket companion. The only objection we can find is, that, although he treats at some length of "*errors of refraction*," he neglects to call attention to the fact that the causation of strabismus or crossed eyes is nearly always those refractive errors, and that if the latter are corrected by proper glasses early in life, the "*cross*" disappears without operation. With this single objection, we consider this little volume an invaluable addition to a medical library; and its nominal price puts it in reach of all, J. A. W.

Elements of Modern Chemistry. By ADOLPH WURTZ, Member of the Institute, Honorary Dean and Professor of Chemistry of the Faculty of Medicine of Paris, Member of the Academy of Medicine, etc. Translated and Edited, with the Approbation of the Author, from the Fourth French Edition, by WM. H. GREENE, M. D., formerly Demonstrator of Chemistry in Jefferson Medical College, etc. With 152 Illustrations. Pp. 687. 12mo. Price \$2.50. J. B. Lippincott & Co., Philadelphia, 1879. (For sale by West, Johnston & Co., Richmond.)

Perhaps within the last decade, no name amongst the firmament of truth-pursuing scientists, especially within the domain of organic chemistry, adorns with greater lustre the record of experimental investigation and theoretic elabora-

tion than that of M. Wurtz. To the labor of this chemist is due, to a great extent, the beautiful and systematic arrangement by which we express the molecular constitution of chemical compounds; and, in the field of the carbon compounds, he has elaborated with great perspicuity and force, theories which heretofore have been stumbling-blocks to workers, and incomprehensible to students.

The author has devoted much thought and attention to the theoretic teaching of chemistry; and with a graceful introduction, leads us through the intricacies of combination, to a consideration of the facts upon which it is based. It is especially in the exposition of chemical philosophy that the author excels, welding in a complete and harmonious manner, abstract theories, which, however exact they may be, yet, when disjointed, confuse and mislead the beginner. We are pleased to note a strict chronology, which adds greatly to the value of the work; and we would mention particularly as subjects of special study, the sections on Definite Proportions and Equivalents, Multiple Proportions, Dalton's Atomic Hypothesis, Gay Lussac's Laws, Dulong and Petit's Law of Specific Heats, Isomorphism and Chemical Nomenclature, and Notation. Much space is devoted to the discussion of the Metalloids. A correct understanding of this important subject is regarded as indispensable to a full comprehension of the molecular edifice. The application of the Laws of Berthollet is pertinent and nicely made. Indeed, there is much to admire; and amid so many excellences, it is difficult to single out the most noteworthy features. Prominent, however, is the section devoted to Isomerism, Metamerism and Polymerism, which, through the aid of the theory of atomicity, is rendered beautifully clear.

To sum up the whole, the author, dating the birth of modern chemistry from the conception of Lavoisier, in reference to combustion, blends with his dualistic theory, the electrochemical hypothesis of Berzelius, and cements the two with Dalton's atomic expression, as revived from the Greek school, thus establishing, on a firm basis, the three grand theoretic conceptions, which, for the first half of this century, were the foundation of chemistry. As the science progressed, these theories did not account fully for the experimental observations of chemists; hence the application of the laws of Gay Lussac. Nor did this suffice, until Dumas and Liebig added their discoveries and enunciated the theory of substitution. The honor of the principle of classification belongs to Laurent, which was developed by Williamson and generalized

by Gerhardt. Then followed Bergman, with his theory of atomicity, from which, as we have seen, the composition of the molecule is understood. No sooner had this theory been expressed and comprehended than Graebe and Leiberman produced synthetically alizarin. It is thus seen how beautifully the discoveries and observations, experimental and theoretical, of numerous chemists are correlated. To the credit of the author, be it said, he has linked with true chemical affinity facts and theories, as handed down to us by the numerous experimentalists since Lavoisier's time, in a well blended, comprehensive, yet simple, treatise, which, we trust, will be duly appreciated by the American student. And whilst we commend the work as altogether desirable for educational purposes, we must protest against the use of such phrases as "arid of," *e. g.*, "this metal is very arid of oxygen." "In this state, it is very arid of water," etc.; "suave odor," as applied to agreeable scent. W.

Editorial.

The Medical Society of Virginia will convene in Alexandria during the latter part of October, 1879. The indications thus early are that there will be a full attendance and a profitable meeting. Eminent gentlemen of the profession of other States will be invited to be present by the local Committee of Arrangements, which Committee (with Dr. R. C. Powell as chairman) is earnestly at work for the good of the Society. The circular Announcement of the session by the Executive Committee will be issued about September 20th, if not earlier.

But we have a special object in just now calling the attention of our Virginia subscribers to this session of the Society. The time has come when some self-protective measures must be considered by the profession. These measures are of equal interest to the people, and they should be instructed regarding them.

In the first place, there is the State Board of Health, which stands organized with sufficient authority in most particulars, but without the appropriation of a single cent for its support or effectiveness. This Board is for the good of the people—not of the profession, except as concerns members thereof as citizens of the State. It argues almost a criminal want of information for one now-a-days to deny the good which re-

sults from an effective State Board of Health. As an economic measure—to refer simply to this now popular argument—thousands of dollars would be annually saved to the State were the State Board of Health to receive only \$4,000 or \$5,000 annually, which sum is necessary to put it upon a working basis. Not to refer to things outside of this State, the able papers contributed by Prof. James L. Cabell, of the University of Virginia, and Prof. Levin S. Joynes, of Richmond (the President of the Society), if generally read, would be sufficient to carry conviction to every reader.

Another matter of vital interest to the people and profession relates to the establishment of a State Board of Medical Examiners. The States around Virginia are establishing such Boards, and they are becoming useful in rejecting those applicants for practice who are not able to stand the examinations. As a result, we are already now and then incidentally hearing of parties who, conscious of their own incompetency to stand fair examinations as to their knowledge of medicine, or who have in reality been rejected by other State Boards of Examiners, are locating in Virginia as a safe refuge to tamper with the health and lives of her citizens.

We make no attempt to argue these points. Our object is accomplished if, by referring to them, we can arouse a general interest on the subjects. And in this connection, we wish to remind Virginia physicians that the Legislative sessions are hereafter biennial instead of annual. If nothing is accomplished during the session of 1879–80, it will be impossible to do anything for two years. Will not the regular profession at once go to work in earnest upon candidates for the Legislature and thus protect their profession and the people from further impositions? We may not accomplish immediately all that is desirable, but we can put ourselves in the path that leads to good results.

Still another subject that may engage consideration at the approaching session of the Society (although we have no authority for saying that it will) refers to the establishment of a Physicians' Mutual Aid Society. It is proposed that this organization within the State Society shall have, for its object, the paying to the families of deceased physicians the total amount of *per capita* assessments. But this matter is a subject for further consideration—the ways and means of perfecting the plan.

In addition to all of this, we hear of a number of papers that are being prepared for the session.

These facts and others that might be mentioned are sufficient to state just now to encourage every member of the

Society to feel interested in the forthcoming session, and, as far as possible, to make their arrangements to attend.

The Statue of Dr. Crawford W. Long—the Discoverer of Anæsthesia—we are happy to inform our readers, will form one of the National Gallery in Washington. It seems that Congress has invited each State in the Union to forward the statues of two of its benefactors, to be placed in the Art Gallery at Washington. At the recent special session of the Legislature of Georgia, James Oglethorpe—the founder of Georgia—and Dr. Crawford W. Long—the discoverer of surgical anæsthesia—were selected as the two most distinguished of the sons of Georgia, whose statues should stand in the Capitol at Washington.

“**Dr. [James L.] Cabell**, and another member of the National Board of Health have resigned. We do not know their reasons for doing so. They probably have found that their professional dignity was not advanced to any great degree by being part and parcel of such a mongrel commission.” *St. Louis Clin. Record*, Aug., 1879.

[We had not heard of these resignations before.]

Typographical.—Page 376 (August No., 1879), line 11 from top read *chlorate* mixture instead of “chloral mixture.”

Dr. Edward Warren (Bey) has just received the decoration of Chevalier of the Legion of Honor.

Damiana.—In Dr. Caldwell’s article, in this number, a foot note was accidentally omitted to the effect that Dr. F. O. St. Clair, of Washington, D. C., introduced damiana to the attention of the American profession; and, further, Dr. Caldwell states that all of his successes from the use of damiana have resulted from the use of that plant as imported by Dr. St. Clair. Many spurious plants are in the market under the name of damiana.

Dr. J. Marion Sims is expected to arrive in New York on September 7th, when he will re-enter practice.

Obituary Record.

Dr. M. B. Wright, of Cincinnati, Emeritus Professor of Obstetrics in the Medical College of Ohio, died at his home August 16, 1879, at a ripe age.

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Original Communications.

ART. I.—**Remarks on Sterility, with Cases.** By R. L. PAYNE, M. D.,
Ex-President of the Medical Society of North Carolina; Ex-Member of the
North Carolina State Board of Medical Examiners, etc., Lexington, N. C.

When we turn back to the writings of our worthy predecessors on female diseases, and see how little attention was given to the subject of sterility in the female, we are surprised and almost led to the conviction that they supposed the time had already come in their own day and generation, when it should be said, "Blessed are the barren, and the wombs that never bear, and the paps which never give suck." Dewees does not even mention the subject, as to any special treatment; and that best, greatest, grandest teacher of his day—Chas. D. Meigs—passes it by almost in silence. In truth, so general is this reticence upon the subject, among the older authors, that we are forced to believe, either that the subject was tabooed by common consent, or that they knew comparatively little about it. Certain it is, that thirty years ago, and before that time, those females who were barren from almost any cause, remained so, in most instances, all of their days; and the exception was to hear of one who became fruitful under treatment.

Of course, I would not insinuate that nothing was done for such cases, because, for many years, there has been a

gradual improvement in treatment, until now the whole order of things is entirely changed; and it has become really exceptional to hear of a barren woman who cannot be relieved by judicious treatment.

Thanks are pre-eminently due to the modern gynæcologist for this change, of whom it may be said without intending to be sacrilegious, "He maketh the barren woman to keep house, and to be a joyful mother of children." Thanks to such men as Sims, Atlee, Thomas, Emmet, Hewitt, Barnes, Goodell *et id genus omne*, of special "finger smiths," a better day has dawned for women; and for none with a brighter or more glorious light than for the poor sterile ones. If these gynæcologists, collectively, had done no more for suffering woman than this, by doing this, they have erected for themselves a monument of honor more magnificent and more enduring than "storied urn or animated bust;" for, in the far distant ages yet to come, barren women who have been relieved by their suggestions, will sing their praises when urns and busts have mouldered into dust.

When we remember the very many and great variety of causes which may lead to infertility in the female, it is really a matter of surprise that so few of them are unfruitful. I do not wish to be understood as asserting that sterility is at all uncommon; but I do say that it is exceptional to find a barren woman, when we consider the whole number of females.

Having had considerable experience in the treatment of such cases, I respectfully submit the following report of a few of them—not, however, with the expectation of presenting anything new, or specially interesting, but simply to illustrate afresh some of the causes of sterility, and some good results of treatment, thus adding, at least, a mite of testimony to the great bulk of experience already accumulated:

CASE I. *Uterine Displacement—Sterility Relieved by Pessary.* Some years since, a young man consulted me with regard to his wife's condition, and expressed great anxiety because of her health and because they had been married six years and were still childless. Of course, I could give him no very satisfactory opinion until I had seen and thoroughly examined the patient; and even after she was brought to me, I was for a time at a loss to account for her indisposition and sterility,

since her appearance and general health were both tolerably good. She was a little pale, complained of a feeling of weight or heaviness in the pelvis, pain in the back and lower limbs, and, at her monthly periods, she was troubled with dysuria and considerable tenesmus, but was as regular as a clock, and lost but little, if any more, than the usual amount of blood. She said she had never had sufficient leucorrhœa to attract her notice; but that she was, in reality, suffering from this trouble was made manifest to me by examination.

Upon examining her with the finger, I found the uterus congested, hypertrophied, and retroverted in the third degree—that is, with the os uteri close up behind the symphysis pubis, and the fundus down as far as possible upon the floor of the pelvis. It was next to an impossibility for her to become pregnant with the womb in this malposition, because the mouth was completely covered over by the anterior wall of the vagina. I had great difficulty in reducing the displaced organ, and did not succeed in doing so until I made my patient assume the knee-elbow position; but then, with a finger in the rectum, and two in the vagina, I returned it to its natural place. The speculum was now introduced, and I was astonished to find so few evidences of serious inflammatory changes after so long a displacement, and so much engorgement. The womb was retained in position by one of Meigs' ring pessaries, and astringent injections were advised. I also gave her iron, recommended her to lie as much as possible upon the front of her body, and cautioned her against too great exercise, and too heavy lifting.

In a short while after this, she became pregnant, and is now the hale and happy mother of a large family of children.

CASE II.—*Stenosis of External Os Uteri—Sterility Relieved by Cervical Hysterotomy*.—Mrs. B. M., a short, thick-set and apparently healthy woman, came under my treatment for the first time several years ago. She was troubled with slight leucorrhœa, and had a good deal of pain at her menstrual periods. She thought that she must have uterine trouble, as she had been some years married without offspring, and declared that was why she consulted me. An examination revealed no absolute disease, and no displacement or deformity, except that the mouth and neck were smaller than natural, with the meatus very small, round and constricted. Simpson's sound would not pass the external os, and Sims' smaller probe was made to enter, with difficulty. After the probe passed through the external os, it was carried with less trouble through the os internum up to the fundus, without causing

pain or the least show of hæmorrhage, thus assuring me that the internal mouth was sufficiently open, that the organ was of normal length, and that there was no metritis. Conjoined manipulation gave evidence of no enlargement or unusual tenderness. Hence I came to the conclusion that her sterility was dependent solely upon stenosis of the external os. I tried gradual dilatation with graduated sounds and sponge tents for a long time, and afterwards more rapid dilatation with Atlee's instrument; but upon the next examination after each dilatation, I found the mouth *in statu quo*, or if at all, but very slightly changed. This, I believe, was owing to the fact that she was a woman of unusual muscular power. At length, I proposed a cutting operation, which was declined; and so I lost sight of her for several years.

About two years since, I was again called to her, when she expressed her willingness to submit to any operation which offered any prospect of relief from her barrenness. She wanted a baby, and did not hesitate to say so plainly, and I was the last man in the world to condemn her. Accordingly, I performed the operation of cervical hysterotomy, after the method introduced by Dr. Sims, using Küchenmeister's scissors for the cutting. Although I did not incise the cervix more than one-eighth of an inch, the hæmorrhage (which most authors speak of as insignificant) was so considerable in this instance, as to give me no little trouble, and was arrested with great difficulty. However, I succeeded in arresting it by inserting pledgets of cotton, which had been steeped in a solution of the sulphate of iron, between the cut edges, and over all was placed a firm plug of cotton, wet with carbolized oil. I then put my patient to bed, and kept her well under the influence of opium for several days. The dressings were not removed for forty-eight hours (my patient being some distance from me); and when I did remove them, and saw the *mouth which I had made*, I was perfectly satisfied that it was large enough for all purposes.* Passing the probe through the cuts, the use of opium, injections of carbolic acid solutions, confinement to bed—in short, the usual treatment, under such circumstances, was pursued until she recovered from the effects of the operation.

There was not an untoward symptom after the cutting, except the hæmorrhage; there was no pain afterwards at her monthly periods, and on the 1st day of November, 1878, I

*In truth, this artificial os *was all os*. It reminded me very forcibly of the head and mouth of a five-inch catfish, and only lacked the eyes and side feelers to render the likeness complete. *It beat Dr. Beck's case in extent, if not in ability.*

delivered her of her first-born child—a healthy daughter, who made her *debut* upon “this world’s temporary stage of action,” just eighteen years and nineteen days after her parents were married.

CASE III.—*Stenosis of External Os Uteri—Sterility Relieved by Dilatation.*—The next case I wish to mention was first seen February 23th, 1878. She had been married about three years and seven months, and had never conceived, but only wished to consult me on account of a most harrassing dysmenorrhœa, from which she suffered regularly every month.

I examined her both with hands and speculum. The womb was in its normal position, and was well developed; but the os externum was small and round, with narrowness of the whole cervical canal; however, the chief constriction was at the external mouth. She was treated by gradual dilatation—first with graduated sounds, and then with Atlee’s dilator; and this treatment was repeated at regular intervals, until she had passed several periods without any pain. Morphina was given after each dilatation, rest for a few days enjoined, and injections of very warm water ordered to be used twice a day. In due time, she was discharged, and I heard no more of the case until the 17th day of last April, at which time my son delivered her of a living, lusty daughter.

CASE IV.—*Conical Cervix—Stenosis of External Os Uteri and Cervical Canal.—Sterility Relieved by Dilatation.*—Mrs. G. L., married about five years without children, or ever having conceived, came under my care in the month of January of last year. Upon examination, the womb was found smaller than natural, with a very long conical cervix, and mouth so very small that I had trouble in finding it. Sims’ smaller probe could not be made to enter it. I then fastened a very small silver probe upon a smooth handle, and, giving it the proper direction, succeeded in carrying it to the fundus. Her sterility was evidently caused by this conical cervix, and the very contracted condition of the mouth and canal of the neck, which accompanied it. Perhaps amputation of the neck would have afforded most speedy relief; but, the patient being near me, I determined to try the effect of persistent dilatation, in spite of the elongated and conoid condition of the cervix. The mouth and canal of the neck were slowly dilated by graduated bougies until I was able to introduce the dilator. As soon as I accomplished this, I passed the blades of the instrument slowly and carefully through the internal os, and gently dilated the whole canal, keeping the parts

slightly on the stretch, for half an hour at a time, by tying the handles of the instrument together; and once or twice after the dilatation with Atlee's instrument, I put my patient to bed and introduced a small tent, with directions to remove it in ten or twelve hours. This treatment was repeated about every ten days. I gave morphia in this case (as is my practice in all cases) after each dilatation, and advised rest for a day or two, and the free use of warm water.

The womb seemed to grow under the irritation, as was shown both by the probe and by bi-manual palpation; and soon I had the satisfaction of passing Simpson's sound without let or hinderance. The patient was discharged about the 1st of May, 1878, and was delivered of a mature, but still-born, male child in the following April. She was attended by an old "granny," who, from all that I could learn, suffered the child to die with its head upon the perineum.

CASE V.—*Retroflexion, with Stenosis of Internal Os—Sterility Relieved by Rapid Dilatation and a Pessary.*—Mrs. L. E. consulted me about the same time as the patient above-mentioned. She had been married four years, and was never *ençiente*. She was regular at her monthly periods, but suffered great pain at each time, and was troubled with leucorrhœa to some extent. A careful examination led to the diagnosis of retroflexion of the womb, with stenosis of the internal os. She was treated by rapid dilatation with Atlee's dilator, as recommended by Dr. Goodell, and a Hodge's closed lever pessary was introduced to aid in correcting the flexion. Before the pessary was permanently removed, and before I thought her well enough to be discharged, she told me that she had "missed her times." Upon learning this, I removed the pessary, and left off further dilatation. It was true; she had become pregnant while wearing the pessary, and in due time gave birth to a vigorous boy.

CASE VI.—*Stenosis of Internal Os—Sterility Relieved by Rapid Dilatation.*—Allow me to mention, *en passant*, that I remember having had a patient some years ago, who was affected very much like the one just mentioned, and who was relieved, both of her dysmenorrhœa and her barrenness, by one rapid dilatation of the os internum. She never had a pain at her catamenial periods afterwards, and in a short while after the operation she conceived, and bore the child to full term.

CASE VII.—*Erosions of Cervix Uteri and Metritis, Treated by Nitric Acid, etc.—Sterility Relieved.*—On the 18th day of March, 1878, Mrs. F. H. consulted me for uterine trouble.

Eight years before this she had borne one child, but ever since then had remained sterile. She was emaciated, hydræmic, and had that peculiar, care-worn expression so common to women who have been afflicted long with uterine disease. She complained of headache, pain, and weakness in the back and upper portion of the thighs, and suffered with a constant sense of fulness in the pelvis, with an unpleasant bearing-down sensation; and she was also troubled with constipation, indigestion, and a profuse leucorrhœa. She was regular as to the time of her catamenia, but the quantity of blood lost at each time was so great as to amount to menorrhagia.

By digital examination, I learned that the womb was heavier than natural, enlarged, and prolapsed; the mouth was soft and spongy, and so patulous as readily to admit the end of my finger. With two fingers of one hand back of the cervix close up in the fornix vaginae, and the other hand upon the hypogastrium, I ascertained that the organ was not only enlarged, but was also quite sensitive upon pressure. With the speculum, I found the mouth and canal of the neck filled with a thick, blood-stained and very adherent albuminous substance. After the parts had been carefully cleansed, there was revealed a regular granular erosion of the os and lips; in truth, the ulceration of the anterior lip was plainly seen as soon as the speculum was introduced. This inflammation evidently extended up into the womb, because the internal mouth and whole canal was patulous, and readily admitted the passage of Simpson's sound; and when the sound impinged upon the fundus, although gently done, it produced very considerable pain, and its withdrawal was followed by a teaspoonful or more of blood. The probe entered fully three and one-fourth inches; and, as before said, the whole organ was enlarged and tender.

After cleansing the parts as thoroughly as possible with a syringe, and with cotton mops securely fixed upon my applicator, I rolled another cotton pledget upon an applicator, dipped it in nitric acid, and after hooking up the anterior lip, carried it entirely to the fundus of the womb, as advised by Atthill, of Dublin, and Goodell, of Philadelphia. After using the acid, a stream of cold water was thrown upon the parts, and suffered to remain in contact for a few minutes: then a large plug of cotton, saturated with carbolized glycerine, was applied to the parts, and directions were given not to remove it until the next morning. I also advised the hot water douche every morning, and injections of a solution of

sulphate of zinc every evening, and I gave iron, quinine, ergot and nux vomica three times a day, and recommended a generous but digestible bill of fare. In a month after this I saw the patient again, and found her much improved in all respects. The acid was applied again, and the other treatment continued with little change. From this time, she gradually improved until I discharged her, and now she, too, has a "bonnie wee bairn."

Five of the cases mentioned above came under treatment, were relieved, and bore children during the last two years. All of the number are now doing well, and all the children are living except one, and that one might most probably have been saved by the timely use of the forceps. In the last mentioned patient, the inflammation evidently extended into the body of the womb; and it is, to say the least, uncommon for a woman to bear a child after having had chronic corporeal metritis. I believe the good results in this case chiefly due to the use of nitric acid, as advised by Dr. Goodell. I have seen it useful in many other patients, and I hereby most respectfully tender to Dr. Goodell my thanks for the very able papers in which I saw it suggested.

ART. II.—**One of the Causes of Vomiting after Etherization.** By JAMES L. MINOR, M. D., Physician to Brooklyn Eye and Ear Hospital, Brooklyn, N. Y.

It is not from absence of material, that we are to justify ourselves of the ignorance which shrouds the cause or causes of vomiting after etherization. Neither can we plead unimportance as an extenuating circumstance; for vomiting is the most objectionable feature in the administration of ether—the anæsthetic of widest application.

It is an established fact, that vomiting occurs most frequently when the stomach is distended, as with food or liquids. Hence we are to infer that the vomiting is to a certain extent mechanical—it being a physiological fact that distension of the stomach, as affording a fixed point for pressure of the abdominal muscles, is a necessary condition in the act of vomiting. (Magendie.)

In the administration of ether, I have, for some time past, noticed its effect upon the stomach, and think that we can rather arbitrarily classify the cases under two heads, in accordance with its action upon this organ.

In class I, the vapor proves so irritating to the aerial tract, that the patient attempts to obviate its inhalation by swallowing the gas.

In class II, there is no deglutition of the vapor, which may be due, either to a greater amount of self-control, or to a less irritable condition of the mucous membrane lining the air passages.

If there be an equal tendency towards nausea in both classes, physiology teaches that vomiting would occur most readily in our first division, because a factor in the mechanism of vomiting is furnished in that class; whereas, we have no such condition in the other division. And, in point of fact, we do meet with vomiting in the first class, or those who swallow the vapor, with a degree of frequency surpassing the second class to such an extent, as to point to the existence of some special cause for it. My experience with chloroform, though limited, conforms, in the main, to the result met with in ether. And the only case of vomiting after the administration of nitrous oxide gas, that I ever witnessed, was preceded by deglutition of the gas. I am, however, not familiar with the two last named anæsthetics.

The first explanation which offers itself is, that the gastric distension furnishes a condition in which the stomach may be considered as being on the alert for any nauseating influence that makes its appearance. Indeed, I have frequently observed emesis take place before the patient had sufficiently recovered, it would seem, to recognize, or respond to the sense of nausea; and for which regurgitation would be a more applicable term. Vomiting is frequently nauseating in itself, and may aid in a more extended continuation of the act, than the original cause would give rise to—thus allowing a larger field of action for the gastric distension, than a casual observation would concede.

I am aware that vomiting occurs in unconsciousness under other circumstances, where some special cause may be found;

as is seen in the administration of emetics, reflex irritation, etc. Ether, however, does not produce vomiting sufficiently often to be classed with emetics, even were its narcotic effect left out of the question. The vomiting is only a complication frequently met with, and is due to accidental cause or causes.

I consequently consider that deglutition of the vapor is a prolific source of vomiting, after the administration of ether, and that its action is chiefly mechanical. Yet, I would not be considered as excluding other causes; for vomiting undoubtedly occurs when it cannot be ascribed to the above cause. I simply offer this as a prominent factor, a knowledge of which may aid us in working out the remaining components of a disagreeable problem.

208 *Washington street.*

ART. III.—**A Contribution to the Study of Laryngeal Syphilis.**

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The subject of this article has received little attention from syphilographers—so little, indeed, that M. Trelat remarks,* “of all the lesions following syphilis, those affecting the larynx have been least studied.” Previous to the discovery of the laryngoscope, all the morbid appearances of laryngeal syphilis not attended with death, were the subjects of numerous hypotheses, and of profound incertitude. Our knowledge of this affection has not yet reached that point which renders new contributions superfluous.† In view of these facts, it is not surprising that there should exist a great difference of opinion among laryngoscopists concerning the pathology of laryngeal syphilis and its diagnosis from phthisis, cancer and lupus of the larynx. Gerhardt, Türk, Roth, Dance and Czermak claim that similar lesions are found in the larynx to those found on the skin; whilst Ferras, Duplay, Isambert

**La France Médicale*, 1869, page 285.

†Schnitzler und Sechtem, *Wien. Med. Presse*, Nos. 27–31, 1878

and Fournier admit only two varieties of lesions—the ulcerative and non-ulcerative.

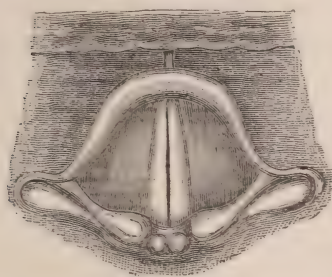


Fig. 1.—Normal larynx during phonation.

It is evident that attempts to classify the many lesions of laryngeal syphilis cannot be other than arbitrary; and it becomes us, therefore, to select that classification least open to objection, and offering the most accurate means of describing the affection.

I shall divide syphilitic laryngeal lesions, with reference to the period which elapses between the primary sore and subsequent phenomena and the tissues invaded by the latter, into secondary and tertiary accidents. The above division is essentially that adopted by syphilographers in treating of syphilis in all portions of the body, and the larynx should not constitute any exception.

The conclusions arrived at in this contribution, are based on more than one hundred cases, examined or treated by me, either at the clinics of Schnitzler, Stoerk and Schroetter, in Vienna, or of Fauvel in Paris. A record was made of quite a number of the more interesting of these cases, and the results are here given *in extenso*.

STATISTICAL.—Syphilis frequently attacks the larynx—six per cent. of laryngeal disease, in general, being of a syphilitic nature. At the Hopital Lariboisière, among 237 throat affections, eighteen (or seven and one-half per cent.), were syphilitic; at the Bureau Central, among 440 cases, twenty-two or five per cent. were of this nature.*

The following statistics, collected by Sommerbrodt,† show the frequency of laryngeal complications in patients who have contracted syphilis: Rühle, in one hundred post-mortems,



Fig. 2.—Epithelial desquamation of vocal cords, from Fauvel

*Martel—*Thèse de Paris*, No. 57, 1877, page 7.

†*Wien. Med. Presse*, 1869.

detected fifteen ulcerations of the larynx; Altenhofer, in examining with the laryngoscope, 1200 patients with syphilis, found twenty-five ulcerations of the larynx; Gerhardt and Roth, in fifty-six patients, found eighteen ulcerations of the larynx; Lewin, in 1000 patients, found forty-four with laryngitis and hoarseness; Englested, in 521 patients, found twenty-five with laryngitis and hoarseness; Sommerbrodt, in eighty-four patients, found fifteen ulcerations. The disease is most frequent between the ages of eighteen and forty, and occurs in women as often as in men.

CAUSATION, ETC.—The appearance of secondary and tertiary manifestations in the larynx is the result of a primary sore or congenital syphilis. Single or multiple ulceration may occur in any portion of the larynx, especially on the epiglottis, vocal cords, ventricular bands, or the aryteno-epiglottic folds, and results from syphilitic laryngitis (Schmitzler*), from mucous patches (Mandl†), or from gommata (Schech*). The exciting causes of the localization of lesions in the larynx in syphilitic subjects, are generally traceable to vocal exertion, abuse of alcohol, tobacco, or to a simple acute laryngitis. Syphilitic subjects, whose occupations expose them to sudden changes of temperature, violent use of the voice, etc., are more liable to laryngeal manifestations than those not so exposed.

“The clinical evidence of the communicability of secondary syphilis is abundant. Instances of the infection of healthy children by diseased wet nurses, and of healthy nurses by suckling diseased children are familiar to all. * * * * In these, the contagion, unless under very exceptional circumstances, must have been derived from a secondary source—mucous patches in the mouth of the child, or on the nipple of the nurse. * * * * A drinking vessel, a spoon or a tobacco pipe passed from one person to another, have all been known to act as vehicles.”‡

In France to-day, every glass blower uses a special mouth-piece, so frequent were the cases of infection from the indiscriminate use of the blow pipe. Eustachian catheters also have, in many cases, been the medium through which syphi-

* *Wien. Med. Presse*, 1878.

† *Maladies du Larynx et du Pharynx*.

‡ Lane, *Lectures on Syphilis*, London, 1878, page 45.

lis was transmitted. It is very probable that the introduction of unclean instruments, which have been used on syphilitic subjects, could produce syphilitic lesions in the larynx as in other localities; but no such case has been reported, to my knowledge. A patient came under my observation at a large European throat clinic, in whom mucous patches were developed on the soft palate, during treatment for an ordinary follicular pharyngitis. Upon most rigid and careful examination, it became almost evident that the mucous patches originated from the careless use of a throat mirror, by a medical student on this man, after examining six patients with secondary pharyngeal lesions. Patients who have received no treatment, or at most incomplete medication at the time of syphilitic inoculation are in great danger of secondary phenomena. Among 157 patients with œdema of the glottis, examined by Sestier, fourteen were caused by laryngeal phthisis, and twenty-four by syphilis.*

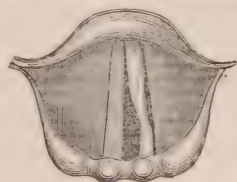


Fig. 3.—Erosion and reddening of left vocal cord, from Fauvel

PERIOD OF INCUBATION, ETC.—The time which elapses between inoculation and the appearance of laryngeal syphilis is subjected to great variation, and ranges from three months to fifteen years or even more. A few authors regard as secondary only those lesions which occur several months after the chancre, and as tertiary, manifestations at a later period. In the majority of cases, this division or classification is well

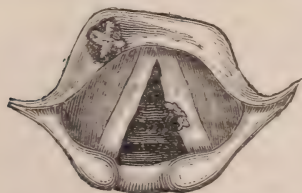


Fig. 4.—Ulceration of the epiglottis and left vocal cord, Burow.

found; but I have seen two

cases of syphilitic laryngeal erythema, and have the records of them, which appeared respectively fourteen and seventeen months after the primary lesion. My experience is that five months is the mean period for secondary mani-

Laryngeal syphilis may precede, be concomitant with, or

*Bucquoy—*Gazette des Hôpitaux*, April 27, 1875.

follow pharyngeal and cutaneous lesions; or it may be the sole secondary manifestation following the chancre—cutaneous and other lesions being absent.

As regards the time in which tertiary lesions appear, I think little can be said definitely. Most of the observations which I have made show that from three to eight years is the minimum, and twelve the maximum period of time which elapsed between the primary and tertiary accidents.

SYMPTOMS.—*Hoarseness* is a constant symptom of laryngeal ulceration; the voice becomes harsh, and in grave cases aphonic. This hoarseness may originate from a paresis, or from a want of approximation of the vocal cords caused by thickening, infiltration, or erosion of the posterior laryngeal mucous membrane.

The *expectoration* in the earlier stages, or in the milder forms of this disease, consists of mucus alone; but later it becomes muco-purulent or fetid, and may contain blood, disorganized tissues or the debris of cartilages.

The *pain* may be spontaneous, but usually appears only during deglutition, speaking, or upon pressure being made in the vicinity of the lesion. When the ulcerative process is on the arytenoid cartilages, or on the posterior laryngeal wall, the pain is often very severe during deglutition. Liquids are swallowed with more difficulty than solids, being more readily forced back into the posterior nares.*

When the ulceration is on the arytenoids, vocal cords, ventricular bands or epiglottis, the patient sometimes complains of *pain in his ears*; and in case the right or left arytenoid or cord is ulcerated, the corresponding ear will, in some instances, be the seat of pain. This symptom, however, is not peculiar to syphilis, as I have met with cases of laryngeal phthisis in which it was marked. I have under my care at this writing a medical friend with phthisical cedema and ulceration on the arytenoid cartilages, who has frequently experienced pain in both ears, simultaneously or alternately. When attached to the clinic of M. Charles Fauvel in Paris, I have often heard great importance attributed to the above symptom as diagnostic of ulceration.

*Poyet, *Annales de Dermat. et Syph.*, 1874, p. 447.

In superficial syphilitic laryngitis, there is rarely *embarrassment in respiration*; but where the lesions are profound, as in deep syphilitic laryngitis, the respiratory troubles are sudden in appearance, and the patient may pass rapidly from apparent health to asphyxia and death. The above changes may be due to a narrowing of the glottic orifice dependent upon acute œdema; the development of new growths; cicatricial contraction; adhesion of tissues, or upon what is rarer, an "an-*chylosis*"* of one of the arytenoid cartilages.

A small piece of necrosed cartilage becoming detached may cause sudden and fatal *asphyxia* by falling into the trachea. The odor of the breath in necrosis of the laryngeal cartilages is very peculiar, being more "rancid"† than that emanating from necrosed bone. Cough may be entirely wanting.

The manifestation of syphilis in the larynx is *subject to great variation*, ranging in severity from a simple erythematous catarrh to great or total destruction of the organ. The primary lesion, the chancre, has been observed on the lips, cheeks, pharynx, pillars, tonsils, soft palate and base of tongue, but never in the larynx, though M. Krishaber‡ claims to have seen a chancre on the anterior surface of the epiglottis.

The secondary lesions appear as erythema, erosions, mucous patches, ulcerations and vegetations.

The tertiary, as gommata, inflammations, necroses and caries of the cartilages.

Acute œdema, with its attendant danger to life, is generally preceded by a rigor or chill, and may accompany both the secondary and tertiary forms of laryngeal syphilis.

Mucous patches, which may occur in any portion of the larynx, present an opaline gray or smoky color, have a glossy or glazed surface, which is tucked or wrinkled, and a slightly depressed centre. Their outline is irregularly rounded or oval, they are elevated slightly above the surrounding membranes, and are encircled by elevated borders of a rose color.

*Browne, *Diseases of the Throat*, p. 213.

†Van Buren, *Am. Med. Times*, July 7, 1860.

‡Isambert, *Conférences Cliniques sur les Maladies du Larynx*, p. 121.

These patches are single or multiple, and can ulcerate, "break down and become very much like follicular hyperplasiae."* In fourteen cases of laryngeal syphilis, Krishaber and Mauriac† found mucous patches in the larynx in ten.

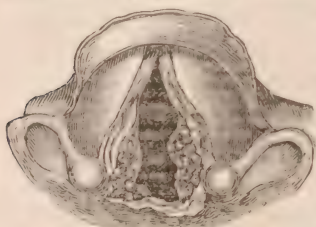


Fig 5.—Extensive ulceration of both vocal cords, from Schnitzler.

resulting ulceration, when deep, may give rise to cartilaginous lesions which generally follow those of the mucous membrane.

LARYNGOSCOPICAL APPEARANCES.—In ordinary superficial laryngeal syphilis or erythema, there exists much the same laryngoscopic appearances as in catarrhal laryngitis. There is hyperemia and a reddening of the vocal cords, confined usually to their posterior portion, which redness is more pronounced near the arytenoids, and becomes fainter or is lost towards the middle of the cords. Sometimes this redness may extend the whole length of the vocal cords, and in these cases small vessels may be seen running parallel to them, giving rise to epithelial desquamation and roughening. Increased redness is the chief feature of syphilitic congestion or catarrh. This color varies in intensity and in tone; it is bright red when acute, and more dusky when chronic. Erosions differ from ulcerations in depth alone. The extent of the ulceration in syphilis varies from the size of a pin's head, to a destruction of the greater part of the larynx, and is at times symmetrical.‡ The mucous membrane in the vicinity of an ulcer is seldom normal, but is usually injected, swollen or oedematous.

Whistler§ describes the growth and development of laryngeal syphilis in the following accurate manner:

*Virchow, *Die Krankhaften Geschwülste*, II, 2, p. 413.

†*Annales d. Mal. de l'Oreille et du Larynx*, 1875, p. 59.

‡Schnitzler, *Wien. Med. Presse*, April 5, 1868.

§*Syphilis of the Larynx*, London, 1879, p. 53.

"The patient will have a laryngeal catarrh in the first few months of the disease (syphilis). Mucous patches of the cords appear and ulcerate. Under treatment, they cicatrize imperfectly. Several relapses occur. The cords become more deeply reddened; they lose their flat appearance, and become rounded and roughened on their surfaces as though worm eaten. The ulcers again break down; their edges swell, become thickened, and are bordered by vegetations. The ventricular bands and the inter-arytenoid folds participate in this inflammation. They are thickened, their surfaces are roughened, and warty growths often spring up and form spur-like projections over the vocal cords."

DIAGNOSIS.—The diagnosis of the milder forms of laryngeal syphilis is occasionally a matter of great difficulty, though we may have the entire history of our patient. The anatomical and laryngoscopic appearances in syphilitic laryngeal erythema (superficial syphilitic laryngitis), are, in most respects, identical with those observed in catarrhal laryngitis. In both affections, the congestion of the vocal cords may be partial, complete, unilateral or bilateral. In the early stages of syphilitic laryngitis, there is no pain, cough, dyspnoea, dysphagia or fever. In the later stages, erosions, mucous patches, ulcerations, œdemata, hyperplasiae, gommata, chondritis and perichondritis may occur, necessitating a differentiation between syphilis, phthisis and cancer.

At this point, I am forced to differ from those authors, who regard certain local symptoms as pathognomonic of syphilitic laryngeal disease, of laryngeal cancer or phthisis; and adhere to the more liberal views of Krishaber, Heinzé, Ziemssen, Schnitzler, Sechtem, Cohen and Mandl.

"There is no clear local sign of distinction between syphilitic, cancerous or tuberculous growths; the diagnosis must be made from other facts connected with the case." (Krishaber.*)

"The attempts made to establish anatomical peculiarities cannot be said to have succeeded, * * * * * and the differential diagnosis between syphilitic and phthisical ulcers may present great difficulties." (Ziemssen.†)

"It is not possible to conclude from the laryngoscopic ap-

* *Annales d Mal, de l'Oreille et du Larynx*, Sept.. 1878.

† *Cyclopædia*, Vol. VII, p. 848.

pearance of an ulcer alone, whether its nature is tubercular or not." (Heinze.*)

"Hence, in many cases it will be very difficult and even impossible to say which lesions are caused by syphilis and which not. * * * * * The diagnosis of many syphilitic affections belongs to the most difficult category of laryngoscopy." (Sechtem and Schnitzler.†)

"There is nothing absolutely characteristic in the appearance of syphilitic disease in the larynx, whether of the simple erythematous form or of the ulcerative variety.

An obstinate chronic laryngitis in a constitution undoubtedly free from tuberculous disease of the lungs is almost presumptive evidence of its syphilitic nature. And the same may be said of the ulcerative form if it can be traced to no other actual cause." (Cohen.‡)

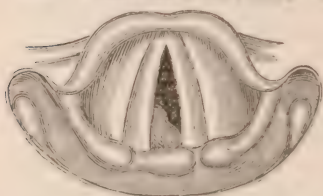


Fig. 6.—Sub-glottic gumma, Türek.

"The differential diagnosis cannot be accurately established without the anamnestics, or by the discovery of syphilitic symptoms in the buccal cavity or in the pharynx." (Mandl.§)

I could augment this list of authorities in support of my opinion, but I will only add that several eminent laryngoscopists have been frank enough to admit having diagnosed and treated laryngeal phthisis for syphilis, and *vice versa*. Fauvel|| submits all his cancerous patients, without distinction, to syphilitic treatment, even though there is no evidence of syphilitic antecedents. I therefore consider the history of the patient, a thorough and careful examination of the pharynx, genitals, skin, lymphatics and lungs, as indispensable in the diagnosis of laryngeal phthisis or syphilis; and regard as unreliable, diagnoses founded upon the "typical ulcer or typical seat of such ulcer." Dr. Mackenzie remarks: "The previous history, present constitutional condition, tem-

*Notice of monograph in *Am. Jour. Med. Science*, April, 1879.

†*Wien. Med. Presse*, Nos. 27-31, 1878.

‡*Diseases of the Throat and Nasal Passages*, p. 116.

§*Maladies du Larynx et du Pharynx*, p. 608.

||*Maladies du Larynx*, p. 714.

perature, pulse and state of the lungs of our patient, all greatly assist us in forming an accurate opinion.”*

The usual seat of *syphilitic ulceration* is on the free border of the epiglottis, from which it may extend to the aryteno-epiglottidean folds and vocal cords. There are often signs of former ulceration in the pharynx, mouth or nares, or upon the tongue or soft palate. Ulceration is generally extensive, and may take place without much thickening. Loss of tissue is a distinctive sign. Ulceration often extends from above downward, and is followed by thickening. The course of syphilitic ulcers is slower than that of phthisis.† The color of the laryngeal mucous membrane is a dull mottled red. The voice is hoarse, and, in advanced cases, aphonic; sometimes we observe a characteristic rasping and rough voice. Cough is very rare. Expectoration in the secondary stage is scant, thick and tenacious. Respiration is in most cases not embarrassed in the secondary stage, and depends, in the tertiary, upon the extent of the stenosis. Deglutition is not painful until the cartilages become ulcerated. There is pain usually on pressure. Generally the skin has been recently affected in secondary syphilitic laryngitis; and in the tertiary, when the laryngeal cicatrices or contracting star-like bands exist, they are almost characteristic, for such bands are not the result of cancerous disease or phthisis. Enlargement of the posterior cervical glands, and other constitutional signs of syphilis, when present, aid us in making our diagnosis.

Phthisis frequently first attacks the neighborhood of the arytenoid cartilages, where it produces a pyriform swelling, in many instances corresponding with the affected lung. When it attacks the epiglottis, it generally produces thickening, and subsequent ulceration is often of a worm-eaten character. In phthisis, a more or less uniform thickening is the principal characteristic; this thickening always precedes ulceration.‡ The ulcerations are paler than in syphilis, are budding fungous, and have irregular swollen

* *Med. Times and Gaz.*, Lond., May, 1869.

† Whistler, *Syphilis of the Larynx*, London, 1879.

‡ Mackenzie, *Med. Times and Gazette*, May, 1869.

and hyperæmic margins which are covered by muco-pus. Phthisis usually commences below and extends upward. The color of the laryngeal and palatine mucous membranes is at first generally pale and anæmic, and afterward gray. The voice is sometimes hoarse in the earlier stages, but may be entirely lost or whispering in the severer forms. Cough is generally present, but depends upon the extent of lung implication. The expectoration is more spumous or frothy than in syphilis. Respiration is hurried in proportion to the lung complication, and in advanced stages is much embarrassed. Deglutition and phonation are nearly always painful when



Fig. 7.—Laryngo-stenosis, Burrow.

the cartilages are affected. It is rare that we see phthisical ulcerations in the larynx without pulmonary phthisis; and auscultation furnishes us a certain means of diagnosis. Hæmorrhage is pulmonary, not laryngeal. Phthisical ulcerations are met with at all ages, and in women as often as in men.

The seat of *cancer* of the larynx is nearly always on the left side and on the superior vocal cord. Among thirty-seven patients with laryngeal cancer, the lesions in twenty-six were on the left side; and sixteen of these twenty-six were on the superior vocal cord.* The epiglottis is rarely first attacked. During the ulcerative period of cancer, there are many buds or growths which appear rapidly, often bleed, and become very large. The color of the mucous membrane is livid. The voice is hoarse from the commencement of the disease, and may be lost entirely in the more advanced stages. Cough may be wanting. The sputa often contains expectorated fragments of tissue, which should be examined microscopically, or a small piece of the growth may be torn off and submitted to the microscope. Respiration is embarrassed, and shortness of breath is readily developed on the slightest exertion. Painful dysphagia exists nearly always, and is very much augmented when the œsophagus is involved. Pain is always present, is of a lancinating charac-

*Fauvel, *Maladies du Larynx*, p. 693.

ter, and is compared by the patient to that produced by the cut of a sharp instrument. When ulceration is well established, these pains are not confined to the larynx, but are referred to the ears, the forehead or the orbit. Salivation is always present in cancer of the larynx.* Laryngeal cancer is most frequent between the ages of fifty and sixty. Men are more frequently attacked than women, and of thirty-seven cases described by Fauvel,† thirty-four occurred in men.

COMPLICATIONS.—Syphilitic pharyngeal lesions frequently precede, co-exist with, or succeed laryngeal phenomena. Edema is an important complication of laryngeal syphilis, and is often followed by ulceration and by such narrowing of the glottic orifice as to require tracheotomy in great haste in order to save our patient's life. This œdema in acute form may occur at any period of the disease. Laryngeal phthisis is also a complication, and the resulting ulceration is incurable. Laryngeal paralysis, resulting from syphilis, is very rare, but cases have been reported by MM. Poyet,‡ Jullien,§ Mackenzie|| and Massie,¶ of Naples. The first named writer cites two cases; the last, four.

There are two methods by which syphilis may cause laryngeal paralysis. First, by pressure exercised by a gonoma on the recurrent laryngeal nerve; and secondly, by producing muscular paralysis, which has been described by Fournier.** Syphilitic laryngo-stenosis, due to cicatrization alone or in combination with œdema, is frequently observed. Tracheal lesions may result from or complicate laryngeal syphilis; and according to Klemm, of Leipsic, abscess is also a complication.

DURATION, ETC.—The duration of syphilitic laryngeal erythema is usually from five to ten weeks; but the more advanced forms of the disease are chronic and of long duration. There is a great disposition to relapse in the disease

*Fauvel, *Maladies du Larynx*, p. 797.

†*Maladies du Larynx*, p. 693.

‡*Thèse de Paris*, No. 16, 1877.

§*Maladies Vénériennes*, 1879, p. 841.

||*Hoarseness and Loss of Voice*, Lond., 1868.

¶*Statistica degl'infermi di malatie di gola*, Napoli, 1872.

***Leçons sur la Syphilis*, 1873.

under consideration, and this fact is held by a few laryngoscopists to be a most valuable diagnostic sign. In a most admirable and classic series of lectures by Whistler,* this subject is fully treated under the title of "Relapsing Ulcerative Laryngitis."

TERMINATION, ETC.—Mild cases of laryngeal syphilis often, under proper treatment, terminate in complete restoration to health; but the severer forms may result in aphonia and enormous destruction of the laryngeal tissues and cartilages—particularly the epiglottis, arytenoids and cricoid. The great narrowing of the glottic orifice, following the cicatrization of deep syphilitic laryngeal ulcerations, has been compared to the contraction in the cicatrization of burns.† This narrowing has, in many cases, produced stenosis and sudden death, by suffocation before tracheotomy could be performed.

A case indelibly fixed in my mind, is that of a man, thirty-five years of age, who came to Paris to consult M. Fauvel in consequence of great dyspnoea, due to cicatricial laryngostenosis. On laryngoscopic examination, the skilled laryngoscopist advised his patient to submit at once to tracheotomy, but the patient desired a delay of at least twenty-four hours, and departed, promising to return to us the next morning for the operation. The same night he was attacked, and succumbed to acute oedema, and was found lying near a window, the glass of which he had smashed in his violent efforts to obtain air. This is only one instance in which the value of the laryngoscope as a guide when to perform tracheotomy in these troubles is demonstrated.

An instructive case is given by Dr. Puglia Thornton,‡ in which the patient, who contracted syphilis at the age of fifty-seven years, was tracheotomatized no less than four times to prevent the fatal termination of an ulcerative laryngitis. The last time the patient was tracheotomatized, it was necessary to saw through the ossified cartilages. Fatal hæmorrhage is mentioned by Türek§ as a rare termination of laryngeal syphilis.

**Syphilis of the Larynx*, p. 53.

†Virchow quoted in *Ziemssen's Cyclopædia*, Vol. VII, p. 866.

‡*Lond. Med. Examiner*, February, 1877.

§*Klinik der Krankheiten des Kehlkopfes*, p. 413.

TREATMENT.—The treatment of laryngeal syphilis is attended with encouraging results in the great majority of cases. A larynx which has undergone the most extensive destructive processes, and is apparently beyond repair, may so far improve under local and constitutional treatment as to hardly show any lesions. I have seen even cicatrices become almost imperceptible.

The treatment with which I have had most experience and success is essentially that practised in the Poliklinik in Vienna by Professor Schnitzler. The various preparations of mercury—calomel and opium, mercury bichloride or proto-iodide—afford us an efficient and almost certain means of controlling the disease; and our aim should be to mercurialize our patient as quickly as possible.

A good method of employing mercury and of avoiding gastric disorders, is one used by Schnitzler in the form of inunctions with mercurial ointment—half a drachm to a drachm twice daily. Hypodermic injections of mercury bichloride, in the treatment of laryngeal syphilis, were first employed by Lewin, of Berlin, and $\frac{1}{20}$ th to $\frac{1}{30}$ th of a grain may be used. Whistler reports several cases treated successfully by these injections. The gums should be slightly touched, and a teaspoonful of alum to a tumblerful of water employed to relieve the stomatitis.

In the treatment of the later stages, potassium iodide checks the progress of perforating ulcers, and promotes the absorption of gommata and vegetations. The above preparation should also be used often and in large doses, in conjunction with local applications in acute œdema and cicatricial laryngo-stenosis. In order to prevent a relapse, Krishaber* recommends that after a cure is once obtained, the patient should be left without treatment for an entire month. Then a teaspoonful of the liquor hydrargyri perchloridi is administered during the first eight days of every month, and fifteen grains of potassium iodide during the last eight days. This treatment is to continue one year. The general health and nutrition of the patient must be sustained by administering iron, arsenic and other tonics; and in advanced ulcera-

* *Annales de Mal. l'Oreille et du Larynx*, Sept., 1878.

tion and suppuration, where the discharge runs down the œsophagus and produces gastric disorders, animal charcoal, sodium salicylate or quinine sulphate must be used.

The value and importance of a combination of local with the general treatment cannot be over-estimated, and without it in many cases, the best general medication will fail to arrest the progress of the disease. In superficial syphilitic laryngitis, accompanied by erosions, mucous patches and light ulceration, inhalations of bichloride of mercury are very useful. The following is the formula as used by Schnitzler:

R. Mercurij bichloride.....grs. iiss
 Alcohol.....f5ij
 Water.....f5viiij. M.

From four to six drachms of this solution are to be inhaled from the steam atomizer once or twice daily.

The lighter pharyngeal and laryngeal lesions often disappear in a few days, under this local treatment, but it becomes necessary at times to fuse crystals of silver nitrate on aluminum or platinum tipped sounds, and cauterize freely all the diseased tissue. In more extensive ulcerations of the epiglottis and larynx, we apply iodo-glycerine after the following formula:

R. Iodine.....grs. viij
 Potassium iodide.....5j
 Glycerine.....f5j. M.

The application should be made by means of a properly-curved brush introduced into the larynx by the aid of the laryngoscope. Astringent solutions are to be applied by means of the laryngeal brush every second or third day, in the manner above indicated; and among the most efficient is zinc chloride, one part to fifty of water; acid nitrate of mercury, one part to one hundred of water; silver nitrate, one part to twenty; chromic acid, one part to five of water; and copper sulphate, one part to twenty of water. Frictions of unguentum hydrargyri externally over the larynx, and potassium iodide internally, are used by Schnitzler in perichondritis of the arytenoids.

When the pain is severe, we may resort to a teaspoonful

of the following solution of Fauvel, inhaled from a steam atomizer, or used as a gargle with water:

R. Morphia muriate.....	grs. xv
Potassium bromide.....	ʒijss
Orange flower water.....	fʒij
Water.....	fʒvj. M.

Local applications of morphia sulphate, one part to fifteen each of glycerine and water, or the insufflation of one-fourth of a grain of morphia sulphate with sugar of milk or gum arabic will often prove efficacious. Gargles of sodium salicylate.

Chloride of lime, Labarraque's solution diluted, or potassium permanganate may be used in fetid breath. Absolute rest of voice and abstinence from alcohol and tobacco should be insisted upon. The patient should not expose himself to sudden changes of the temperature.

The application of mercurial ointment to the larynx externally, the use of croton oil liniment on the chest, or two blisters placed on either side of the larynx in such a manner as to leave space to perform tracheotomy, if required, generally relieves acute œdema. "These means, and the internal administration of potassium iodide failing, a strong solution of chromic acid, one part to two or four of water, applied directly to the œdematous portion of the larynx, often immediately succeeds in reducing the swelling."* Scarification of the œdematous parts is effective in preventing suffocation, and should be made freely and often if necessary.

I have observed good results in chronic œdema from insufflation of iodoform in powder in combination with powdered gum arabic and sugar of milk, or the application of iodoform and glycerine—thirty grains of the former to an ounce of the latter.

Tracheotomy may be necessary at any period of laryngeal syphilis, particularly the tertiary, and should not be delayed too long, as the opinion of Beverly Robinson,† in regard to this operation in ulcerative phthisical laryngitis, is, in my estimation, doubly true of laryngeal syphilis. "Our object

*Isambert mentioned in *Paris' Thesis* of M. Ferras, No, 156, 1872, p. 80.

†*Am. Jour. Med. Sciences*, April, 1879.

in performing tracheotomy should be to prevent rather than to relieve asphyxia.* The statistics of Trélat† and Krishaber,‡ show that 76 per cent. is the rate of success in patients tracheotomized for laryngeal syphilis. The canule should be removed as early as possible after tracheotomy; for the longer it remains, the greater will be the difficulty in dispensing with its use; and cases which require the permanent use of the canule occasionally originate from neglect of this point.

The treatment of cicatricial laryngo-stenosis is chiefly operative, and includes division of the contracting bands of adhesion, etc., by means of various forms of laryngotomes, or forced dilatation by means of special dilators. The reader is referred to a recent production of Prof. Schroetter,§ of Vienna, on laryngo-stenoses and their treatment, and to the writings of Schmitzler, Von Burns, Stoerk and Oertel.

Potassium iodide, mercury in various forms, tonics, excitomotor stimulants, intra- and extra-laryngeal faradization have all been recommended in the treatment of paralysis resulting from laryngeal syphilis.

916 *E Street N. W.*

ART. IV.—“**The Cause of Consumption,**” and its “**Cure by the Salisbury Method of Diet.**” By E. Q. NORTON, Cleveland, O.

The wide spread of consumption and its almost invariable fatal result will justify the attempt at a better understanding of this “dread disease.” No attempt will be made to give the article a scientific dress, and the writer disclaims all credit for the success of the method pursued—only reserving credit to himself for having followed faithfully the rules which have proved in so many cases to be essential to a complete recovery. No statistics will be given, farther than to note that over 75,000 people die every year from this disease alone in the United States, as is estimated by some.

The one thing to be noticed in the study of the statistics

*Hamilton, *Dublin Journal*, No. XXXIII, 1862.

†Masson, *Thèse de Paris*, No. 314, 1875, p. 26.

‡*Annales de Mal. de l'Oreille et du Larynx*, 1878, p. 329.

§*Beitrag zur Behandlung der Larynx-Stenose*, 1876.

of consumption is, that climate has not so much to do with it, as has the method of feeding of those who suffer from it.

New England baked beans have been the cause of more disease than has the severity of its climate. In this case, surely "there can be no hope of setting the life right, by setting the understanding wrong."

To avoid all mistakes, the writer asks that, for the time being, the reader will forget all he was ever taught regarding this disease. Start afresh, and with a determination to be unbiased by preconceived ideas, or the notions of others. Drop all views, whether allopathic, homœopathic, or eclectic—all -isms and -pathies, and let the student reason carefully, using his own judgment about what he sees around him.

How much it is the writer asks of his readers, may be judged from the fact that he would have them believe that consumption (*phthisis pulmonalis*) is *not hereditary*. This view is not in accordance with previous conclusions, and is seemingly at variance with all statistics and experience. The incorrectness of the idea of the heredity of consumption, is equaled only by the fatality among those who accept it as correct. In nearly every case where one is taken down with consumption, if one or both of the parents have died with this disease, the belief is that there is little or no hope for the present sufferer, and resignation is the only thing sought to be inculcated. Consumption is hereditary just as a father's spectacles or cane may be—if one accepts and chooses to wear the spectacles, and walk with the cane, they are hereditary, and pass from father to son, but not otherwise. Whatever way one may live, the children will be likely to follow; and if the diet of the parents was food likely to ferment—such as fruits, vegetables, etc.—the children will follow in the same manner of eating. The principal thing needed is to change the diet, and regulate it according to the requirements of the patient's system. One may be predisposed to consumption in the sense that they have been accustomed to a diet that will, if persisted in, cause that disease; but it is within the power of every one to rid themselves of this predisposition by avoiding the cause. Consumption is, not like some other diseases, entailed upon us—only the conditions

are, in a secondary sense; and a child born of a consumptive mother has no more liability to this disease, than one whose mother died of old age, provided the child will live in accordance with the requirements of health. The child's blood may have more or less of yeast, or fungoid growth in it; but live aright, and this yeast will die out, because the blood is no longer a fit soil for it to grow in. This yeast being removed, there remains no more tendency on the part of a child born of consumptive parents to consumption than there is in any other person.

On the other hand, a strong, well man, born of healthy, long lived parents, will develop consumption if he eats exclusively or too freely of food now known to cause it.

A great point is gained when we satisfy the patient that his case is not necessarily fatal because the parents died of this disease, and that it need never be fatal if properly treated.

As to how low one may get and recover, depends upon individual cases, and can be determined only by time. The writer can only refer to cases, and let the facts speak for themselves. If there has been no organic lesion—no absolute breaking down of some vitally important organ of the body, then one may reasonably hope to recover. Cases are not uncommon of people living with one lung only, being in a serviceable condition, and that lung developed to twice its normal size, because doing double duty.

To briefly recount the incidents in my own case, I will say that for a year I was troubled with a hacking cough (now known to be caused by the rising of carbonic acid gas from the stomach, and tickling the throat), which finally became so persistent as to interfere with the proper pursuit of business. I had recourse to "cough syrups, cordials, cherry pectorals," etc.; and for another year all kinds of specifics were tried in turn—only to be found of no real or permanent value, but rather injurious. Then the different medicinal waters were taken, followed by every form of "pathy," electricity; and finally travel was resorted to in the hope of climatic cure. For three years, this travelling treatment was kept up; and I travelled from the pine forests of Maine, and the White

Mountains of New Hampshire, to the plains of Kansas and Colorado, and from the bracing air of Minnesota and Dacotah Territory to the warm air of Florida. All climates were tried, and with temporary relief following every change of climate, but only to be succeeded by a more rapid decline after a few weeks or months in every instance.

Of all places, the *extreme* South is no place for a consumptive. In a dry atmosphere, the food ferments less actively, and the atmosphere, because of its rarity, has a tendency to cause expansion of the lungs; but in a warm or damp atmosphere this fermentation goes on much more rapidly.

The great benefit derived by some invalids who go to the extreme South comes from the fact that the climate is such that one can be out of doors much of the time; and this being in the open air is of itself beneficial. But of seven consumptives who boarded at the same house with the writer, while in Florida, and who depended upon climate and medicine to cure them, while still eating freely of fruits and vegetables, five are known to the writer to have since died; of the other two their fate or present whereabouts is unknown. In a tropical climate, the abundance of fruit and vegetables are most to be feared as offering tempting opportunities for excessive eating. Then the days are warm, and the nights cool, which bring too marked a change in the twenty-four hours, to insure exemption from colds.

From the South, the writer returned to Boston, where the services of some of the most eminent physicians in the East were secured—no two of whom agreed in the diagnosis of the case, and no one of whom could give relief, or suggest how it could be obtained. They all doctored the symptoms while the cause remained. Then again was run the gamut of specifics, antidotes, cathartics, resolvents, hypophosphites and other positive (?) cures, until all had been exhausted, and no relief obtained from the disease which seemed already too far advanced to be checked in its course.

Added to this came loss of voice—being unable to speak above a whisper for nine months—with a partial paralysis of the lower extremities, right arm, heart and lungs, followed by loss of memory, and power of concentration, and impair-

ment of sight, attended by night sweats and swelling of the feet and legs. I began to lose rapidly in weight, with a corresponding loss of strength, which left me unable to ascend a flight of stairs without resting on the way. When my voice began to fail, I engaged the services of Boston's most successful elocutionist, who endeavored, without success, to restore, by exercise and drilling, the control of the vocal cords. I was now confined to the house, and for three months kept an almost helpless invalid from partial paralysis of the heart, which the physicians then supposed was neuralgia of the heart.

While confined to my bed, a friend, with the kindest intentions, intimated the possibility of my not being ever any better, and suggested the necessity of my thinking of, and preparing for the worst. To me, this was like the prod of a goad to an ox, or the lash to a horse; and I left my bed, broke up housekeeping, stored my goods, and started on my way to the pure air of Colorado, hoping that that, at least, might prolong my life. But I was working upon excitement—doing a large business upon a small capital; for upon my arrival at Cleveland, Ohio, I found myself unable to go farther, and a rest was taken to enable me to gain strength to reach my destination. Fortunate for me was it that I rested here; for I was again thrown upon the care of Dr. J. H. Salisbury, who several years before warned me of my impending danger, and who has been the means of directing me in the course to pursue to regain my health.

The necessity of limiting the length of this article, must be my excuse for not entering more fully into an extended notice of the details. The important point now is to say, that the Doctor went to work at once to remove the cause. Here was what I wanted—some one who could tell me what was the cause of my trouble, and at the same time direct me so to live as to regain my health. I had all these years been doctoring symptoms and effects, leaving the cause untouched. I had depended upon medicine to get me well, when medicine alone never did and never will cure disease. An acute case may be relieved by medicine, or a chronic case may be assisted—the organs being stimulated or temporarily strength-

ened by a judicious application of some specific, but no disease was ever directly cured by medicine.

The mistake I made in common with most others was, to rely upon the Doctor, much as the school boy expected the teacher to learn his lesson for him. If we would get well and keep well, we must work for it. In this case "eternal vigilance is the price of health."

Now that I had learned the cause, I needed only to remove that, and the trouble would disappear. The cause of all my trouble was in eating too freely of food likely to ferment in the stomach. My diet had been largely of fruit and vegetables, often making a meal from fruit alone in its season. Prunes were an especial favorite with me the year round. The reverse of this was to follow a diet of meat exclusively, by which the defective alimentation becomes improved, the digestion improves, and more perfect assimilation takes place. This is followed by increased appetite and more healthy secretions. •

I cannot better illustrate this method of treatment, which is known as the "Salisbury Diet Method of Cure," than to give the directions I followed in my own case. One hour (not less) before each meal, and on retiring at night, I drank one-half pint of hot (not warm) water. This was to wash out the stomach and bowels, and remove the yeast which was in them. This alone is an excellent appetizer, and does more good than all the medicine one can take. Since all food which would ferment was forbidden, it was left for meat alone to be the food, and nothing can be more easily digested, or give more strength than meat. The principal food is broiled steaks; but chicken broiled, oysters broiled, or raw—with lemon juice instead of vinegar—salt and pepper to taste. One mouthful of bread or boiled rice to six of meat and a cup of tea or coffee without sugar or milk, may be taken. Wild game can be used if desired for a change; but for steady eating, lean, broiled steak will be found the most desirable and most readily obtained. The round steak is preferred because of its juiciness; and if taken from the third to the sixth cut will be the most nutritious of any.

The method of preparing beef is as follows, and is the re-

sult of two years experience of the writer's wife in broiling meat: First, trim off all the fat, then cut out the bone and all the large fibres and strings; then chop fine as for sausage meat. Next, with a knife and fork, go over it again and remove all the little fibres that may have escaped notice before, and it is then ready for shaping. The meat is now almost a paste, and can be made into steaks of any size, or formed in a plate into one large piece to cover the broiler, which, when cooked on one side, can be turned by covering with the plate and reversing both plate and broiler, taking care to save the gravy. Butter, salt and pepper to taste after being cooked—not before—as it hardens the meat. A change can be made to porter-house or tender-loin steak if desired—not chopped, but trimmed of all fat. A roast of beef, lamb roast (trimmed of all fat) and dried beef can be eaten sparingly after awhile; but for steady eating, broiled steak will be found the best. Lamb and chicken should be avoided if there is a tendency to diarrhœa; and in cases of excessive diarrhœa, stop the hot water for a few times, and substitute a glass of boiled milk, made black with pepper.

On retiring, take a bath of hot water, in which has been put a tablespoonful of ammonia, and finish with a brisk rubbing.

This is the treatment as followed in my own case, and is the one to be followed in most cases, with but slight modifications, according to individual needs.

At first it may seem hard to sit down to a table filled with the delicacies of the season and eat only meat, with perhaps a few mouthfuls of bread or rice. But if this diet be strictly adhered to for a few days, the desire for other things will be found to be less and less each day, and soon cease to be any temptation. A good resolution is necessary, but a good resolution is nothing if not carried out. It is a good starting point but a poor terminus.

In the general method of examination by auscultation with the stethoscope, etc., the patient may be, and in fact generally does progress into the second year of the disease before it is detected; while by the more scientific and surer method of microscopical examination of the blood, the first indica-

tions of the disease can be detected; and thus the physician will be enabled to remove the cause, and ward off entirely what would otherwise terminate in a long sickness, if not ultimately result in death.

The cause of this disease, as has been said, is a fungoid or vegetable growth in the blood. If a drop of the blood be examined under the microscope, it will be found to be filled with this vegetable growth, which looks like the spores of baker's yeast. This abnormal growth lives upon and floats in the blood, reducing the number of red corpuscles, and causing the blood to become watery, and depriving it of the life-giving qualities. The stomach of one in this condition is little else than an yeast pot. All that is taken into the stomach ferments, causing carbonic acid gas to generate. This rises mainly to the cavity of the left side of the stomach, this being the highest point, and paralyses the muscles, and so interferes with the action of the heart, lungs, and vocal cords as to cause loss of voice, and often partial paralysis of the legs, as in my own case. The drinking of hot water washes out the yeast which is in the stomach and bowels, and thus serves to give increased appetite. If nothing but lean meats are now taken, this stomach fermentation phase of the disease will soon disappear. There will be no more pain from wind or gas in the alimentary canal, and no heart burn nor loss of voice nor disagreeable eructations.

Another feature of this system of treatment is, that the patient himself is to do the work, and not leave all to the physician. This employs the mind and makes one thoughtful and more observing; and moderate regular daily exercise relieves the monotony of the sick room.

Any gentle exercise which is not too exhausting, and which has a tendency to expand the chest, will be found to be of value. A gentle drilling with light dumb-bells, or some equivalent weight is good, taking care to throw the head well back of the perpendicular, and going through all motions with the lungs inflated to the fullest extent. Make a practice of breathing to the full capacity of the lungs often throughout the day, beginning with ten deep drawn breaths, then resting and repeating and increasing the number with

the ability to do so without tiring. If one is very low or weak, as brisk a rubbing by another as can be borne will be found an excellent substitute for any better form of exercise; and whiskey or New England rum may be used, which is found to impart much increased vitality.

In extremely low cases, avoid all excitement, using the care necessary in any sick room. Where one can eat but a small quantity of meat at a time, begin with five meals a day, served hot, and never hurry mastication. In case of five meals a day, of course the hot water need not be taken any oftener than when three meals are given. Mustard drafts, flannels wrung out of hot water, red pepper sprinkled upon the wet flannel, and hops dipped in hot water, with other simple remedies, may be used to advantage as required. Salt, and most kinds of spices, can be used, while lemon juice should take the place altogether of vinegar. One may begin by eating one-half of a lemon, and if this is found to agree, increase the quantity gradually until a whole one is eaten every day.

The whole diet consists in food that will not ferment, to the entire exclusion of all kinds of fruits and vegetables, sweets and sour (excepting lemon), and all food that will ferment in the stomach. For a relish on the meat, Halford's, or the imported Lea & Perrin's Worcestershire sauce, may be used as freely as desired.

The writer cannot impress too strongly upon the mind of the patient the importance of being faithful in following the rules laid down, and the necessity of placing himself under the care of a competent physician, who knows the value of many remedies proven to be beneficial to the sick, and that he may be under the care and restrictions of a controlling mind who will demand strictness and fidelity on the part of the patient. A lukewarm assent which commands but an indifferent effort on the part of the patient will do but little. Start, not so much with a desire to try this way, as to determine to get well by the help of it.

This method has long ceased to be a matter of experiment. It is a reasonable one, scientifically correct; and experience has proved it to be successful. Not only can consumption

be cured by this method of diet, but an opposite one, if persisted in, will reduce a strong, well person in less than one month to a dangerous condition of consumption of the bowels; and if more time is taken, to pulmonary consumption.

Below is given a list of only a few cases. The writer has followed many of them with much interest. And they are not picked cases, but just as he became acquainted with them—some of them having come to live with him for a short time to learn how to prepare the meat, and to sit down to a table where there was nothing but meat to eat, and to be under the immediate care of Dr. Salisbury—the physician who has so successfully worked up this disease.

CASE I.—Miss M. (now Mrs. T. H. W.), Cleveland, Ohio, 1867. In last stage of pulmonary consumption—a mere skeleton—not able to be turned in bed. Chest and backbones within an inch and a half of each other. Her physicians had left her, as her case was considered hopeless. The day her mother placed her under this treatment, her clergyman was at her bedside, and in the most emphatic terms denounced Dr. Salisbury for holding out encouragement to one in so hopeless a condition. In less than two years, she again assumed charge of her school, and taught for four years. She was married in 1872, and now has three fine, perfectly healthy children. Her own health is perfectly restored. Present weight, 160 pounds.

CASE II.—Mrs. F., Cleveland, Ohio, came under treatment during the second stage of pulmonary consumption, in 1872. Her health is now perfectly restored, and remains so.

CASE III.—Mr. C., Alliance, Ohio, came under treatment just as he was passing into the third stage of pulmonary consumption, with consumption of bowels also. He is entirely recovered, and still well.

CASE IV.—Mrs. B., Cleveland, Ohio, began this treatment when in the last stage of the third year. She was having hæmorrhages, and was advised by her physicians to try, as a last resort, some other climate; but she was too weak to be moved. She began treatment in 1868, and in one year fully recovered her health, and is still well.

CASE V.—Mrs. K., Warren, Ohio. In the last stage of pulmonary consumption; was bed-ridden, and had been given up two years previously to die. She began treatment in 1869, and has recovered, and has since had two healthy children.

CASE VI.—Mr. C., Cleveland, Ohio, baggage master at Union depot. He was in the last stage of the second year of pulmonary consumption. He was bed-ridden, and had lost the use of his limbs from paralysis. He was very much emaciated, and was given up to die. He is now a strong, well man, attending to business every day.

CASE VII.—Mr. W. J. E., Fremont, Ohio, came under treatment during the second year of pulmonary consumption (August 12, 1878), complicated with Bright's disease of the kidneys. He was very nervous, excitable and weak. He began by eating one-half pound of meat per day. He left my house August 17th, eating two and a half pounds of meat. Digestion, secretions and nervous condition improved; gaining in strength each day. About the middle of September, 1878, he called again and stopped one day. He is now eating three pounds of meat per day on an average.

He ate some fruit, which caused a bad coughing spell, and he got discouraged. He was over-persuaded by family physicians and friends, and gave up the meat diet; and his doctors finding him failing so rapidly, advised a trip to Kansas. He was told by Dr. Salisbury that even if he did not follow the meat diet strictly, he was good for a year or more if he would remain at home and care for himself; but if he went away it would be immediate death. He, however, went to Kansas, and died in two weeks after reaching there.

CASE VIII.—Lieut. C. C., U. S. Army, stationed at New Orleans; home, Fremont, Ohio. He was in the last stage of pulmonary consumption, and, for the past year, he has had consumption of bowels. He was a mere skeleton, barely able to walk. He came home on furlough to die, and began treatment during the summer of 1877. In eighteen months, he reported for duty, and is now in active service. Weight 140 pounds; health better than for years previous.

CASE IX.—Mr. A. U. O., Canton, Ohio—a young man of very large build. He had a bad case of dyspepsia, with extreme weakness, loss of will-power and memory, fast going into quick consumption, losing thirty-eight pounds in three weeks. He began treatment during July, 1878, eating one-half pound of meat per day, increasing to eight pounds in a few weeks. He built up very rapidly, gaining sixteen pounds in three weeks. He is now fully recovered, and weighs 195 pounds; strength in proportion.

CASE X.—Mrs. A., Worcester, Mass., was given up as hopeless in the last stage of the third year of pulmonary consumption. She is now fully recovered.

CASE XI.—Miss A. C., Washington Courthouse, Ohio, was in the last stage of pulmonary consumption, with extreme emaciation. She had incessant cough. She began treatment September, 1878. She was unable to walk and was brought to the doctor's office in the arms of friends. She had night sweats, and swelling of the lower extremities. She is now rosy-cheeked, a hearty eater, and is gaining every day. She "got a set back" from indulging in fruit or vegetables, and carelessly taking cold while visiting friends, but came at once down to work again, and is now feeling better than for years previous. She is out in all kinds of weather, but eats generously of meat.

CASE XII.—Mr. O. Doherty, a well known railroad financier of New York city, now in London, Eng. He was in the last stage of pulmonary consumption. His right lung was entirely broken down—not enough left of it to fill a quart measure. That side of his chest had sunken so that he has been obliged to pad it to make his clothes fit him. Left lung affected also. He recovered his health, and the left lung—now twice its normal size—has since done duty for both. The patient is still well and strong. He began treatment in 1854, and fully recovered in one year.

CASE XIII.—Miss A. E. H., Worcester, Mass. She was in the last stage of the second year of pulmonary consumption, having had an almost incessant cough for four years, with spitting of blood last year. She had also partial paralysis of the vocal cords, causing loss of voice. Night sweats, with extreme weakness also afflicted her. She began treatment June 5th, 1879, eating three-quarters of a pound of meat, increasing in a few days to two and a half pounds per day. Up to date (August 5th) her cough has almost entirely ceased, and the night sweats have entirely stopped. She walks one and a half miles with ease, and no ill effect; her voice has been recovered, and her strength has increased to more than before she was sick.

CASE XIV.—Miss —, now Mrs. B., Mt. Vernon, Ohio, came under treatment when in the last stage of pulmonary consumption, March, 1872. She was married in September of the same year. She has had two children since, and is still well.

CASES XV, XVI.—Mrs. T., and also Mrs. Y., Mt. Vernon, Ohio, both had pulmonary cases and have entirely recovered.

CASE XVII.—The writer's own case has been a very marked one. He began treatment by eating one-half pound of meat per day; increased to eight pounds per day, which

was kept up for several weeks. In two months from beginning treatment, he was well enough to go back to business, and has ever since been attending to it without any farther trouble. His flesh hardened right up, and his muscle increased to a remarkable extent. He is eating now two and a half to three pounds of meat per day. Chest measure at beginning of treatment, contracted $27\frac{1}{4}$ inches; inflated $28\frac{1}{4}$; chest measure to date, August 5th, 1879, contracted 32 inches; inflated $34\frac{1}{4}$. Weight 129 pounds, with not so much increase in fat as in blood and muscle. He has not *tried* to see how much in dead weight he could lift, but he has lifted within the last week, with ease, 400 pounds. The muscles in the calves of his legs have increased one-half inch in the last month. He is now feeling perfectly well, every day, with more life and spring in him than for years previous to his sickness.

ART. V.—**Hemorrhoids and New Mode of Operating—With a Report of Two Cases of Cataract following Removal of Hemorrhoids by Ligature.** By GREENSVILLE DOWELL, M. D., Washington, D. C.

In 1857, while living at Columbia, and practising in Brazoria county, Texas, I treated a great many cases of hemorrhoids. I usually cured all new cases with the following prescription, which is published in *Naphey's Modern Therapeutics* (Dr. D. J. Brinton, of Philadelphia, editor), to whom I gave it:

R. Plumbi. acetatis..... $\mathfrak{z}\text{j}$ =4 grammes
 Argent. nitratis..... $\mathfrak{z}\text{ij}$ =1.20
 Morph. sulph.....gr. ij to v=0.165 to 0.42
 Cerat. simplicis..... $\mathfrak{z}\text{j}$ =32 grammes.

Mix. S.

After first washing the piles with cold water, anoint them with a portion of this mixture, then push them back into the rectum.

This cured most cases; but I had some cases that it did not even relieve. I applied nitric acid to one—a Mr. R. Phillips—but the pain was so severe I would not try it again. I ligated another in the usual way, and left the tumors to slough off, which took about ten days, during all of which time there was great pain, with an ichorous septic discharge, having an offensive smell, and greatly intensifying the pain at each stool. He finally recovered, but little tits were left, which often inflamed and gave him so much pain that I had

to clip them off with scissors. The other case (Mr. P.) had an attack of bloody flux, and came near dying from hæmorrhage. At last he consented to sit up over the bed and let me tie the hemorrhoids; but before I could finish he fainted and died.

From this time, I determined to change my mode of operating, by requiring the patient to be put on his side and kept under chloroform. Mr. Phillips, upon whom nitric acid was used, suffered so much at times that he would almost faint from hæmorrhage, and felt conscious that he would have to die if his condition was not relieved; and knowing that my other patient had died, he concluded to be operated on by ligature, which operation I performed in 1857 (October)—the patient being 65 years of age, and having had piles for over twenty years.

In the operation, I was assisted by Dr. S. S. Partes. The patient was first made to sit over a tub of hot water until the piles were fully protruded. Then he was put on a hard mattress and chloroformed. When he was fully under the influence of the chloroform, I took a large curved needle, threaded with strong wrapping thread, such as is used in the stores. I passed this in and out of the base of the tumors, leaving a loop on the inside and one on the outside, thus going back and forward until I had fully passed the threads



under all the tumors. I then cut and tied, first to the right and then to the left, one inside and the other outside of the

anus, until I had tied up all the threads, and thereby strangulated the entire circle of hemorrhoids, cutting off the circulation completely. The patient was then let up from the chloroform, and as soon as consciousness returned, he was given half-grain doses of morphia every hour until he was perfectly easy; and thus he was kept until eight o'clock next morning, when the tumors were all black and entirely insensible. Then, taking the ends of the ligatures in the left hand, I pulled them out as far as possible, and with a pair of scissors curved on the flat, I cut off all the tumors below the ligatures, making the parts perfectly smooth. There was some oozing of blood, but it was immediately suppressed by lint saturated with perchloride of iron solution. Nothing more was done, except that the patient was made to keep his bed for a few days, when an action from the bowels came on naturally; he had less pain than for years, and there was no hæmorrhage, but only a straining of the discharges by blood. The parts were perfectly healed up in ten days, and there were no tits or points to sting and burn, as most often occur after leaving the ligatures on, and to slough out. He may be said to have been cured in twelve hours, and almost without any pain. He is, I believe, still living, and has never had even a slight return of the old lesion.

This mode of operating, if well done, always make a radical cure, and the anus is smooth. On two occasions I have had the anus to be contracted; so that I had to dilate it, which I did by simply putting my thumbs in the anus, and pressing them outwards, as I have operated for fissure of the anus; this completely relieved each case.

I had a bad case of stricture of the anus from hemorrhoids being removed by the *écraseur* by a physician, in which the anus was so completely closed that the gentleman had to use enemata every time he had a stool for seven years. When he came to me, I could not introduce my little finger into the rectum. But taking a female catheter I explored the rectum, and found the sphincter alone contracted, and quite a pouch within, that would have held about a pint. Having put the patient under chloroform to make the examination, and while he was still under chloroform, I gradually dilated the anus until I could insert my wire anal speculum with ease. I then made a tampon of lint and moistened it with sweet oil, and put it into the anus—leaving an inch, at least, outside of the sphincters. When the patient came from under the influence of the chloroform, he was given half-grain

doses of morphia when necessary to keep him free from pain.

On our next day's visit, nothing could be seen of the tent, and the patient complained of distention. We presumed the tent had been forced out, and gave the matter no concern.

On the eighth day, he was given a purgative, and when it took effect, he was in great pain and sent after me. I found that the sphincter had contracted again, and I was forced to give him chloroform, and again dilate. In doing this, I found the tent in the pouch and removed it, dilating fully as before. The patient came from under the chloroform, and soon had a full and free stool without much pain, and has never been troubled since.

I have operated many times since on this plan, and have never had the least trouble. Every case has been a perfect cure—no return of the tumors or fissures, and no hæmorrhages except immediately after cutting out the ligatures with the congested tumors, usually removing them without using chloroform.

Cataract following the Removal of Hemorrhoids by Ligature.

Gen. S. Colleston, of Prestons, Galveston, Tex., had suffered for years from piles, and the tumors were the largest I had ever seen. I removed them by ligature, according to the above plan, and made a perfect cure; but in six months afterwards (being in fine health), he began to lose his sight, and finally had well-formed cataract in both eyes.

The relationship of this case of cataract to the cure did not attract my attention until a second case occurred. In 1876, while in Atlanta, Ga., Dr. T. S. Powell asked me to operate for piles on a patient of his that had suffered for a long time, and was nearly exhausted from hæmorrhage. These tumors were very large, and took about twelve ligatures to strangulate them. They were tied as above described, and cut off. The next morning there was considerable hæmorrhage on the removal of the ligatures, but it was completely stopped by repeated applications of the perchloride of iron solution, and the patient recovered perfectly. But on my return to Atlanta last May (1879), I inquired about him, and Dr. Powell informed me that he was blind from cataract; otherwise he was perfectly well.

These two cases of hemorrhoids being about the worst I had treated out of several hundred, I thought there might be some connection with the long straining and hæmorrhages that finally (on relief) caused cataract, and this should be another reason for removing hemorrhoids by ligatures when they cannot be cured by the prescription given above, or something similar.

I do not feel willing to close this article without mentioning what is now termed the modern operation for piles—the *injection* of carbolic acid, ergotin, perchloride of iron, etc., with a hypodermic syringe. This method will, in many cases, produce a cure, but is always attended with danger, and is liable to produce fistulæ, and is always as painful, or more painful, than ligature according to the above plan; and has all the objections that ligature after the old method—long confinement to bed, septic effusions, offensive smells, etc. All these we avoid by my operation, and often the patient is out the next day, and has actions without half the pain suffered before the operation. But I believe it is best and safest to give opiates for a few days until there is sufficient effusion of lymph to prevent any lacerations in the mucous membrane that might end in fistulæ or fissures, but these have not followed the operation in any of my cases.

1430 New York Avenue N. W.

Clinical Reports.

Extraction of Vesical Calculus by Incision and Dilatation of the Female Urethra in a Patient Aged Sixty-Five Years—Recovery. By GEO. E. WILEY, M. D., Emory, Va.

I was called, *March* 12th, 1879, to see a white, unmarried woman, aged 65, suffering with what seemed to me to be only excessive nervousness. My visit being a very hurried one, I did not examine the patient carefully—an error that is not excusable under any circumstances—but prescribed potassii. bromidi, \mathfrak{z} j, aquæ, \mathfrak{z} vij, to be taken in tablespoonful doses three times a day. I left word that I would not return unless sent for.

March 16th, I was summoned in haste. I found the patient in a nervous chill, complaining of great sensitiveness in the hypogastric region, unable to bear even the weight of the bed-clothing, and heavy, dragging pains in the back and groin, and nausea. The urine was clear and abundant, and with the exception of the quantity, and the too frequent calls to evacuate the bladder, there was no indication of urinary trouble. My diagnosis of the case was prolapsus uteri, with reflex nervous irritation, which the subsequent history of the case proved to be the truth, but not the "whole truth." She refused to be examined, and I prescribed chloral hydrate, grs. xv, to be repeated in six hours if necessary.

March 17th I was called to see patient again. My friend, Dr. William L. Dunn, accompanying me. Symptoms not materially changed since last visit. Dr. Dunn thinking the case presented decided evidence of hysteria, I prescribed accordingly.

March 19th. The patient's condition is about the same, with the additional trouble of not being able to pass but a few drops of urine at a time, and the desire to urinate in the last twelve hours had become incessant. The constant straining to evacuate the bladder had greatly increased the sensitiveness in the hypogastric region, rendering her condition so utterly miserable that she was willing to undergo any operation that promised relief. I therefore immediately attempted to introduce a silver catheter to evacuate the bladder, but found I could not pass it. I made a vaginal examination, and found (as I had first supposed) the uterus prolapsed and considerably hypertrophied, and impinging somewhat upon the urethra and neck of the bladder. I pressed the uterus back, and again attempted to introduce the catheter, but was disappointed at still meeting obstruction; but after pressing upon the instrument gently for a few moments, it passed into the bladder, and as it did so I distinctly heard and felt it click against something, and a more careful examination revealed the presence of a calculus. Upon informing the patient of this, she told me she had no doubt but that such was the case, since she had passed by the urethra during her life not less than five or six hundred calculi, varying in size, shape and color, some of which she still had in her possession. I was then shown a box containing several—one of large size (did not weigh it), which she said she did not pass by the urethra, but came from her throat some three years ago. At the time, her throat was very sore, and was pronounced by her attending physician to be tonsillitis. An ab-

secess formed and broke upon the inside, and during the discharge something dropped into the œsophagus, causing her to cough, when this calculus flew out upon the floor. With the above history, of course I did not doubt but that there was a calculus in the bladder.

After drawing from the patient a pint and a-half of clear urine, I introduced a Hodges pessary, which gave considerable relief. I also gave a fourth of a grain of morphia, and left the patient comparatively easy.

March 20th—10 A. M. Patient passed a tolerable comfortable night, and is cheerful, and consents to have the calculus removed, which I determined to do at an early date.

I visited the patient regularly until *April 18th*, when I found that the uterine support and tonic treatment had so much improved her general condition that I determined to operate on the following day.

April 19th. Patient doing well. On account of other engagements, Dr. Wm. L. Dunn did not meet me as I expected, and I determined to try to remove the calculus by simply dilating the urethra; and if I failed in this, to wait until I could have an assistant. The instruments I had with me were only those of a minor operating case. Having several gum catheters of different sizes with me, I began by introducing the smallest (having previously stopped the openings with wax) to prevent the urine from escaping. Some time was occupied before I succeeded in passing the largest catheter. I now introduced my finger into the vagina, and gradually worked the calculus down into the neck of the bladder. I continued this *vis a tergo* pressure until I had gotten it an inch or three-quarters into the urethra, when I could get it no further. I removed the catheter, and introduced a pair of bullet forceps, and got firm hold of the calculus; but upon traction considerable hæmorrhage followed, and I desisted. There was nothing left for me to do now but push it back in the bladder and leave it, or else combine incision with the dilatation I already had. Not being willing to lose what I had gained, I took a bistoury and wrapped it with a strip of cloth to near the point, to prevent wounding the parts, and guarded by the forefinger, I introduced it until I could distinctly feel the stone. I then made an incision about a half inch. and by gentle and continued pressure, the calculus dropped out, followed by a gush of urine very slightly discolored with blood. I had given the patient no anæsthetic on account of not having a safe assistant; but had given her a *full dose* of sulphate of morphia. She com-

plained of very little pain. I introduced a catheter and left the patient quiet.

April 20th. Patient doing well; all the urine escaping through the catheter; tenderness in the hypogastrium greatly diminished. She continued to improve steadily, until now she is entirely well. There is *no incontinence* of urine—an evil that so often follows these cases.

Emory and Henry College, Va.

A Case Illustrating the Value of Salicylic Acid as an Antiseptic in the Treatment of Suppurating Wounds. By A. V. CUNNINGHAM, M. D., Zeligonople, Pa.

I was summoned on June 11th, 1879, to reduce a fracture in the case of an old lady 72 years of age. Upon my arrival, I discovered a very bad compound fracture of the radius and ulna of the left arm, at the junction of the middle with the lower third. The fracture was of such a nature as frequently requires immediate amputation. The old lady, of course, was anxious to have the limb saved, if possible. I therefore brought the bones into apposition, and dressed the arm with two broad splints, as by this method there was less liability to impinge upon important vessels, and thus impede or stop the circulation, thereby threatening a condition of sphacelus which so often results from tight bandages. The broad splints also obviate any pressure laterally upon the fragments, and thus prevent any encroachment upon the interosseous space, which particular is of the greatest moment.

The wound caused by the protrusion of the bones was dressed with carbolyzed lint. Notwithstanding every precaution was taken, suppuration ensued and continued profusely for three weeks. A cavity extended along the ulna, nearly to the elbow, from which great quantities of pus could be expressed. I used a solution of carbolic acid (one part to 15 parts of water) every four hours as an injection. The cavity was thoroughly cleansed by injections of tepid water, after which the carbolyzed solution was injected and withdrawn. I noticed by crepitation that there was a spicula of bone disconnected from the upper fragment of the ulna, which was occasioned by the suppurative process. I therefore made an incision on the back of the arm of three inches, and removed a portion of bone two inches in length. I then abandoned the carbolyzed injections and substituted salicylic acid, as the carbolyzed injections produced no apparent benefit. As soon as I began the use of salicylic acid, I noticed

a diminution in the quantity of pus; which entirely ceased after its use for one week. The acid was of the same strength as the carbolized solution. Salicylic acid being odorless, is much more pleasant than the very offensive carbolic acid. It is not as dangerous an injection as carbolic acid, on account of its being less irritant, and also less liable to produce symptoms of poisoning. The old lady, notwithstanding her age, is possessed of considerable vitality. The radius united kindly, without any constitutional treatment, and she will have a straight and useful arm.

I report this case simply to add my testimony in favor of salicylic acid as an antiseptic in the treatment of suppurating wounds.

Correspondence.

Hot Water in Chancroids—and Especially in Phagedenic Chancroids.

Mr. Editor,—I have lately found a new and very valuable therapeutic application of hot water, namely, in the treatment of infecting chancroids, and more especially in that very intractable form--the phagedenic.

My method of procedure is very simple: A piece of sheet lint is made into a pretty solid ball, and being held in a pair of dressing forceps, it is immersed in water not much below the boiling point (in many cases a temperature of 130° or 140°F. will answer), and then this ball of lint is to be pressed forcibly upon the sore. This is repeated daily for several successive days, or until the granulations begin to assume a healthy appearance. As a dressing, simple cerate will suffice, or the sore may be sprinkled with iodoform and covered with dry lint.

The hot water coagulates the albumen in the secretions, and gives to the sore sometimes a whitish appearance, as when nitrate of silver is applied. It is less painful than any of the mineral caustics, and the pain subsides more quickly; and there is no doubt that it destroys the infecting qualities of the sore as thoroughly, while it possesses the great advantage that it does not destroy any of the living tissues.

Yours truly,

FRANK H. HAMILTON.

43 W. 32d Street, New York.

Reform Needed in Medical Colleges.

Mr. Editor,—The discussion that has grown out of the paper of Dr. Van Bibber, of the Johns Hopkins' Hospital, in connection with medical matters in Baltimore, presents an opportunity that should not be permitted to pass unimproved, or unoccupied, at least, as the subject lies in immediate proximity to the important question of improvement in medical education generally, now properly attracting the attention of the professional mind in this country. In order, however, that what is about to be said may receive the attention of your readers, ambiguity and circumlocution will be avoided, as far as practicable, and the main points presented with the terseness and perspicuity consistent with the important questions of reform and improvement in the system of medical education in the United States.

It will be seen, it is believed, from the statements soon to follow, that "no improvement," really deserving the name, has been made in medical education in this country for the last three decades, or quarter of a century, at least; and that the graduates of the present day are no better qualified for the *practical* duties in the leading branches of the profession, than were those before the adoption of reform, so-called; save, perhaps, in the single matter of obstetrics; and except in the cases of graduates of the University of Pennsylvania, and Harvard University. These two great institutions must continue to be regarded as out of the question in any statement that may be made in this communication in relation to *reform*, as what may be said of it in connection with others, will in no wise apply to them.

For many years the medical schools of Philadelphia and New York held annual sessions of *five* months, during which there were delivered from *five* to *seven* lectures daily, except Sunday, on the *seven* fundamental branches of medical science. Three years study, including two full courses of these lectures, and the presentation of the tickets of all the professors as evidence of the same, and a thesis of his own composition on some subject appertaining to medical science, were the conditions precedent to "coming forward" for examination for the degree of M. D. These were the requirements in

Philadelphia thirty-five years ago. The seven branches taught, and upon which it was expected the student to pass a satisfactory examination, were anatomy, physiology, surgery, obstetrics, practice of medicine, materia medica and chemistry; and the student of that day will remember it occupied *all* the time at his disposal to "keep up" with those lectures. He will also recall to mind that few, if any, of his professors *exhausted their subjects* during those sessions; and it may be said of many of the graduates of those times that they compare very favorably with their most distinguished brethren of Europe!

Did time permit, and the occasion seem to require it, whole pages of your journal might be filled with illustrious names of the living and dead physicians and surgeons who graduated in those days; who, as writers, teachers and practitioners, would add lustre to any country, and contrast well with the greatest names that adorn the annals of time. Professors were chosen *then* because of their *fitness* in *all* respects for the important and responsible duties they were to perform, and not because of mere availability, as has been the case at a later day, in instances that might be named.

So much for the past, and the reader is respectfully invited to look calmly and dispassionately upon the picture just delineated, and that soon to be outlined, and discover wherein *improvement* has occurred in the teaching in some of the medical schools of these later days—particularly in those practical branches in which the interests of humanity are most deeply involved. This is, however, anticipatory of the verdict he will reach!

Most of the schools at the present time advertise three years study, including the two sessions of lectures (five months), and writing a thesis, before their students are finally examined for their diplomas. So far, there is clearly no attempt at *improvement* in the educational advantages of the present day. But instead of the old and magical number of *seven* professorships, some of them parade *ten* to *twelve*, and even as many as fifteen professors have been heard of in some schools. In some of these annual announcements and circulars, a list of *several* branches or subjects are added to, or fol-

low the names of the professors, most of which could profitably be lectured upon *one* per day, to an intelligent audience, for a period of five months. To these names, are sometimes appended also the number and street upon which the office or place of business of such professors are situated. This string of official duties is occasionally seen following the M. D. at the end of names that a few years before belonged to persons of limited erudition, and who were engaged in occupations entirely foreign to, and incompatible with, medical science. These are generally, though not always, the names of the *available* professor, who, for the most part, was only a few days or weeks before the use of his name and professorships, comparatively unknown to fame, save in the small circle of relations and friends in which his career was enacted.

This is not an imaginary picture; would that it were; but in the interest of suffering humanity, and an ancient and noble calling, it must go upon record. But while, alas! the foregoing is true of some professors of the present day, it is pleasant to state it is not so of all of them. Indeed, there are, among the new or modern professors, many men whom the profession delights to honor, and who are qualified to discharge their important duties in every essential quality and particular. But candor compels the statement that such men are in the minority in some of the schools, and have scarce an existence in other faculties of more recent date.

A most important fact seems to be ignored or overlooked by the reformers, in not *increasing* the number of lectures *per diem*, if they would continue the amount of instruction in the *seven* recognized *cardinal branches* during their five months sessions. It is reported, and the daily programmes of lectures seem to bear out the statement, that seldom more than *five* lectures are attempted in some schools, where the number of chairs have been augmented to *ten* or *twelve*, and the number of *branches* attached to the names of the professors amount to almost double that number! And it occasionally occurs that *two* professors of practice, and as many of surgery, are seen in faculty announcements, in addition to the other chairs. It requires no argument to prove that,

without material prolongation of the sessions beyond five months, the students of these numerous professional schools *cannot* be as well instructed in the *fundamental* branches, as were and are those in the colleges who regard and still teach them as the radical or foundation work of a successful practical career. In fact, it is logically demonstrable that unless these *faculties* and their *students are superior in every respect* to those of the past and present, where those fundamental branches are taught and studied, it is absolutely certain that the graduates of such schools cannot be as well prepared for the practical duties of the profession as were and are those in which the seven branches are still adhered to in their daily instruction!

No one, we apprehend, would attempt to draw such a line of distinction, or arrogate such claims for these faculties over those of the University of Virginia, with its *four* professors; those of the Medical College of Virginia, at Richmond, with eight; nor the more reputable of the other medical colleges of the South, that still retain the old number of professors and curriculum of studies. Or the University of Pennsylvania, which yet requires its candidates for the doctorate to pass an examination *alone* on the old *seven* branches so often alluded to, and that, too, notwithstanding its increase of professorships and requirement of attendance upon *three* instead of *two* sessions or courses of lectures.

It would be difficult, indeed, to demonstrate or establish *any* superiority in either the faculties or students of the more recent schools, that have *augmented* their faculties without increasing the time of study over their predecessors or contemporaries that still adhere to as thorough indoctrination of their students in the cardinal branches of the profession as practicable, except in mere numbers; and let us hope that "*omne nimium vertitur in vitium*" may not be verified in them.

No intelligent physician doubts the propriety, or necessity, *even*, for increase in the period of instruction in the regular branches, and also the delivery of lectures and giving illustrations and demonstrations on special subjects. But as *these latter* may go on *pari passu* with the *regular course*, the *time of instruction in the schools must be materially increased.*

Were this done, no reasonable objection could be advanced against establishing a few chairs, filled by thoroughly qualified professors, for imparting information on the *specialties* recognized and practiced by physicians and surgeons of the present day. Common sense and common justice to a noble calling conspire to demand that where the *number* of branches is *increased*, the *time* of instruction should be correspondingly *lengthened*.

Very respectfully yours,

"MEDICUS."

Original Translations.

From the German and French. By WM. C. DABNEY, M. D.,
Charlottesville, Va.

Iodoform as an External Antipyretic.—Dr. Coesfeld (in the *Deutsche Med. Wochenshr.*, 23, 1879.) The patient in whom this observation was made was suffering with phthisis, with tubercular infiltration of almost the whole left lung. There were vague pains in the left side, and it was for the relief of these that the iodoform dissolved in collodion was applied with the result of producing a very decided and prolonged fall of temperature. No effect was observed after the application of a 10 per cent. solution, but a 33.3 per cent. solution produced very marked effects. The morning temperature of the patient had been $39.^{\circ} 1$ C.; the evening temperature, $39.^{\circ} 5$ C. Within six hours of the application of the solution of iodoform in collodion, there was a fall in the evening temperature of 2.7° C.; and after twenty-four hours, there was still a fall of 2.1° below the point at which the evening temperature had been prior to the use of the remedy. A twenty per cent. solution produced some effect, but not so marked.

No unpleasant action on the respiratory, circulatory or digestive organs was observed.

Floating Kidneys and their Surgical Treatment.—Dr. Jr. Kepler (*Archiv. für Klin. Chir.*, XXIII) reports in his paper eleven cases of "floating kidneys," in which there was no complication, and demonstrates from them that the affection is by no means so devoid of discomfort or danger as is generally supposed. As a general rule, disturbances of digestion are very marked, and there are neuralgic pains in the back, abdomen and lower extremities. In addition to this, the loss

of strength is sufficient in many cases to interfere seriously with the work of the patient, and the nutritive disturbances finally reach such a point that even life is jeopardized. Sexual power is also greatly lessened, and in many cases depression of spirits and melancholy result.

As no palliative measures give relief, the writer thinks surgical measures should be adopted in such cases, and the diseased kidney should be extirpated. He records two cases in which this was done by Dr. A. Martin with the most satisfactory results. In both patients the kidney was sought for in front, through an opening in the linea alba, and in both instances the peritoneum was opened.

In all cases the right kidney was the one displaced, and generally the cause could be traced to some violent exertion. The fat which is usually so abundant around the kidney rapidly disappears in this affection. In conclusion, Dr. Képpler protests against the "dogma," that in cases of floating kidney, the percussion sound on the affected side is clearer than in health.

The Dangers Attending the Use of Pilocarpin in Eclampsia.—Sänger, of Leipsic (*Archiv. für Gynäk.*, Bd. XIV, Heft 3.) Pilocarpin has been frequently recommended in puerperal eclampsia to promote the elimination of urea by the skin; but there are dangers attending its use in certain cases to which attention is called by Sänger in the paper before us. Some months ago, he called attention (in the *Wiener Med. Presse*) to the fact that the use of this agent produced such a free flow of secretion from the bronchial tubes as to threaten suffocation. He stated in those articles that when the eclamptic attacks were severe, and succeeded each other at short intervals, so that the patient remained unconscious, the secretion remained in the bronchial tubes, running back into their finer ramifications, and giving rise to genuine suffocation.

In the present paper, he reports three cases where this result followed the use of pilocarpin. The first patient had had eight attacks before being admitted into the hospital. The attacks continued after the birth of the child in spite of the use of chloroform and other remedies. After fourteen convulsions, three-tenths of a grain of pilocarpin was injected. Very soon afterwards the patient showed every appearance of suffocation; the breathing became very labored, and the face blue. Auscultation showed that the bronchial tubes were filled with mucus. It was with great difficulty that the patient was resuscitated. Artificial respiration was resorted to;

the tongue was drawn forward, and the thick mucus removed by the fingers. An injection of atropia was also given to counteract the action of the pilocarpin. The cyanosis and difficulty of breathing gradually lessened, and after an hour the patient was relieved, and finally recovered.

The second case ended fatally. Eclamptic convulsions came on during labor, which was terminated by the forceps. After forty-four or forty-five convulsions, an injection of pilocarpin was administered. Very soon afterwards, symptoms of œdema of the lungs came on, and the patient died twelve hours afterwards without having had another convulsion. No *post mortem* could be obtained.

The third case also ended fatally—the woman dying undelivered in the sixth month of pregnancy. In this case, also, œdema of the lungs came on after the injection of pilocarpin—the patient living only ten hours. No autopsy was made.

Pilocarpin causes a paralytic condition of the walls of the blood-vessels, which is especially marked in the branches of the pulmonary artery. Thus a high grade of congestion of the lungs is established, with subsequent acute œdema. The aëration of the blood is interfered with, and cyanosis results. The heart's action is weakened; the tongue falls back on the epiglottis, and death soon ends the scene.

From these cases, it will be seen that pilocarpin is a dangerous remedy in those cases where the eclamptic attacks are already present and severe, and when consciousness is lost or blunted so that the patient makes no effort to expectorate.

Tuberculosis of the Eye—Is it Proper to Remove the Organ to Prevent the Disease from Becoming Generalized?—This question was discussed at the meeting of the Société de Chirurgie on the 9th of July last. M. Auger commenced the discussion by reporting the case of a patient under the care of M. Parinaud. In this case, there was apparently no other organ affected, and M. Auger advised that the diseased eye be removed—it being not only useless, but the seat of a “malignant neoplasm.” He had seen a case where the eye was allowed to remain, and the disease become generalized six months after; and M. Parinaud had also seen a case in which the eye was alone affected at first, but the patient died a year afterwards of subacute meningitis. It was the opinion of Laennec and Virchow that tubercle was at first local, and subsequently became generalized. M. Verneuil stated that M. Auger's paper had advanced an opinion which should not be allowed to pass without a free discussion. The view that

tuberculosis was at first localized had given rise to the most singular and the most useless operations. Even bones which were tuberculous had been resected in order to eradicate the disease. He called attention to the fact that tubercle had been known to become chalky, to be tolerated, and even to disappear after a long time; while, on the other hand, he thought that there could be little doubt that an operation would frequently hasten the generalization of the disease. He thought it much better to send patients suffering from an apparently localized tuberculosis to sea-bathing establishments, where they would stand a chance of being cured.

M. Trébat thought there was a very great difference between tuberculous and other neoplasms. The latter, even if cancerous, always had a localized seat primarily. Tuberculosis he considered a general disease from the first. Some time ago he saw a patient with tubercles on the tongue. Some months afterwards this person was taken with acute pulmonary tuberculosis, which soon ended fatally. Operations for tuberculous growths he considered only justifiable when pain or some other circumstance necessitated them.

M. Giraud-Toulou said that so long as the sclerotic had not been broken through by the neoplasm, he thought there was a hope of preventing generalization by removal of the eye.

M. Lefont said it was very hard to formulate an opinion which would suit every case. He thought tubercle was a general disease from the first in the great majority of cases. He called attention to the fact that limbs affected with white swelling were amputated, and this disease was usually thought to be scrofulous in its nature.

M. Tillaux was of M. Verneuil's opinion. He thought it utterly useless to remove the eye to prevent generalization; but it was frequently advisable to operate in order to remove a useless, and, perhaps, offending organ.

M. Marc Sée said that in Germany tubercle was considered, primarily, a local disease, and some of the experiments tended to confirm this view. Hence, he considered the matter still rather doubtful.

Chronic Nephritis Treated with an Infusion of Jaborandi and Injections of Pilocarpin.—(*Lo Spirimentate and Rundschau*, July, 1879.) M. Cantieri reports two cases of chronic nephritis treated with infusion of jaborandi and hypodermic injections of pilocarpin. In both cases, other remedies had been used without result, and it was fair to presume that the benefit in these cases was due to the jaborandi and its alka-

loid. M. Cantieri thinks it is not only an excellent diaphoretic, but a hydragogue in other respects also, as it acts on the parotid glands, kidneys and pancreas, as well as on the sweat glands. The vomiting often caused when an infusion is given internally, is readily prevented if care be taken not to give the medicine within four hours of the time of the last meal. It acts much more powerfully also if given during the intervals of digestion. The infusion was given in conjunction with laudanum by enema eight times; three times when given in this way the sweating was profuse, and on four other occasions it was considerable. When the œdema was very considerable, pilocarpin was given hypodermically in quantities of from 5 to 30 milligrammes in a gramme of water. Twenty-eight such injections were given, and vomiting occurred only six times. In small doses, there occurred only elevated temperature and moderate sweating. To cause a free discharge, it was necessary to give 15 milligrammes; the flow thus caused lasted from four to seven hours, and was followed by a feeling of chilliness. The salivation began two minutes after the injection. It was noticeable, also, that the amount of saliva secreted was not proportional to the quantity of medicine administered.

Within from three to ten minutes after the injection, there was a considerable diminution in the size of the pupil; but soon afterwards it became much dilated, and remained so during the action of the remedy. In both patients, redness of the conjunctiva and face, and a free flow of tears was caused. The urinary secretion was increased, but the effect was not in proportion to the amount of the drug used. There was no perceptible effect on the amount of the urates secreted, but there was a very decided and lasting diminution in the amount of albumen in the urine. The heart's action was strengthened, and the number of beats increased from four to eight per minute; at the same time, the respiration was a little more frequent. The temperature sank a few tenths of a degree, which was evidently caused by the increased heat loss. The number of beats of the heart and the respirations became slower after a time.

From Spanish and French. By CHAS. R. CULLEN, M. D. (P. O. Richmond, Va.), Henrico Co., Va.

The Black Pest.—Dr. Poggio treats of the terrible plague of Russia, comparing it with the same disease in past centuries. The symptoms were: 1. Chill. 2. Whole skin, and

cheeks particularly, red. 3. Great heat. 4. Intense thirst and dry tongue. 5. Nausea and vomiting. 6. Frequent evacuations and cheese colored. 7. Lymphatic swellings or buboes. 8. Cold skin, etc., followed by death in 60 or 70 per cent. of cases.

In 1649, a similar plague appeared with much the same symptoms, and with results even more fatal. In the first 100 cases, 86 died in a population of 1,700 persons. In 200,000 people, 23,463 died. In Asia, 32,840,000 died; 12,000,000 in Germany; 530,000 in Sicily; 350,000 in Poland. The total deaths in all countries amounted to 42,836,486.

As an effect of this universal mortality, people became fanatics in every respect. A portion went into convents and nunneries to appease an angry God; others formed societies of brotherhood and became persecutors. The Jews were singled out as victims of punishment, who were unjustly accused of poisoning wells, and were condemned by the hundred until Pope Clement VI checked the fury of this fanaticism.

During this plague, no remedy effected any good. Nurses, doctors, grave-diggers, and all who came in contact with the sick, died.

When the war between Turkey and Russia terminated in 1869, the Turkish soldiers carried the disease to Moldavia and Valaquia; and in 1829, the latter country was again invaded by a similar plague, brought by soldiers returning from the Russian and Turkish war. Greece suffered similarly from the same war.

In 1542, in Italy the plague carried off all the Sisters of Charity and doctors, and orders were issued by the government to seize physicians everywhere and force them to wait on the sick. The results of these epidemics in Russia went to prove that the only way to stop the disease is to stamp it out by withdrawing the population and by vigorous military quarantines.—(*Revista de Medicina Practicas.*, Madrid, Spain, No. 64.)

Treatment of Albuminuria by Oxygen.—Dr. Beaumette calls the attention of the medical profession to the treatment of albuminuria. After unsuccessfully using all other remedies, he made his patient inhale oxygen gas, and in twenty-four hours the albumen disappeared. Other cases were reported in the *Bulletin de Therapeutique*. After using it, the albumen reappeared in many cases. Dr. Greletty stated that in diabetes it is serviceable—both sugar and albumen diminishing considerably.

Small-pox in the Vienna Hospital.—When a small-pox patient enters the Hospital he is washed from head to foot with warm water, and covered with paper compresses over the whole body, saturated with one part of glycerine and two of water—leaving apertures for the eyes and nostrils. The baths are given daily, and the clothes are put on after the bathing. The result is a falling off from 9 per cent.—without baths and compresses—to 4.46 per cent. when baths and compresses are used, and the duration of the disease from 15 to 18 days.

Glycerine in Place of Cod Liver Oil in Phthisis.—Dr. Benevente, a specialist in the treatment of phthisis, prefers glycerine to cod liver oil, as the digestion is thereby improved, the diarrhoeas are more easily controlled, and the night sweats diminished, as are also the cough and expectoration.

Boils.—Dr. Olaville, of the "Hospital of St. John of God," injects boils with a mixture of phenic acid, 5 parts; alcohol, 10 parts, and 100 parts of water. The second day, the fever and swelling commence to subside without suppuration.

Aneurism of Carotid Artery Treated by Compression.—Dr. Rubio treated a case successfully in two months. Internally he gave 30 grains of iodide of potassium daily. In the discussions of the Madrid Academy, Dr. Domingo gave a very minute history of the treatment from ancient to modern times.

Tetanus.—Dr. Corominas treated a case successfully by 30 grain doses of hydrate of chloral, alternating with 30 grains of salicylate of soda.

Case of Menstruation at Nineteen Months of Age.—Dr. Javin reported the case before the Madrid Medical Society. The flow lasts generally only 24 hours, and in other respects is similar to the usual age.

Dr. Calderon inquired if the child had leucorrhœa or diarrhœa. He remembered that children with vesical calculus sometimes suffer from bloody vaginal flows—the effect of excitation and pelvic congestion; also, that children with leucorrhœa pass bloody discharges, and that constriction of the belly produced congestion and secondary hæmorrhages, which require medical treatment.

The above case commenced when three months of age, and was first published in the "Encyclopedia Medico Farmaceuta of Barcelona."

A Woman without a Uterus.—Dr. Dogman, of Kars, Russia, reports a girl, nineteen years of age, without either womb or ovaries. She only had menstrual flows (except vicariously) of from two to four days' duration, and these vicariously.

rious hæmorrhages commenced when she was only eighteen months of age.

At the Moscow Medical Society he referred to three other cases of married women—one of 25, one of 26, and the other 36 years of age. The last one had an examination eight years after marriage with the hope of ending the sterility. In these cases, no sign of ovary could be found.

Eczema.—(From *La Tribune Medicale*, by Dr. Brame, of Tours.) The basis of treatment is cold tar. It is a purifier and antiseptic. It may be mixed with glycerine or olive oil. When the disease is stubborn, iodide of silver may be added. A simple purgative aids. When the eczema is very persistent, small scarifications may be used also. Sometimes the chloride or bromide and cyanide of silver have been used on the scalp and scrotum and around the ears. The iodide of lead should be reserved for the lichenoids eczema, forming very hard crusts. The iodide of mercury should only be used in syphilitic eczema. Ioduretted calomel can be successfully used, and when pityriasis is conjoined, a pomade of oxide of mercury should be added. When the boils are large, punctures with dissolved tannin or iodide of silver should be used. In exceptional cases, the sulpho-cyanide of iron and tannin—both dissolved in iron—are used. Sulphate of soda is a good purgative in this disease.

Phosphate of Lime.—This is a medicine much under-valued. It builds up the constitution by aiding digestion and nutrition, and enables the bony system to grow much fatter than without its use. It can be made into a syrup and given to children with rachitis. A fracture of the anatomical neck of the humerus was healed in thirty-two days by its use. Several other fractures were healed in fifteen to twenty-five days, when without it the bony growth would have been much slower. During pregnancy, the lacto-phosphate of lime should be given for the growth of the fœtus, especially in women of such constitutions where the drain on the system is very great, and even then the child will be born sickly and with weak bones.

Proceedings of Societies.

The American Pharmaceutical Association.

[Specially reported for *Virginia Medical Monthly*.]

The 27th annual meeting of the American Pharmaceutical Association was held in the Supreme Court room at In-

dianapolis, Ind., commencing at 3 o'clock P. M., on the 9th day of September, 1879. The room had been previously very handsomely decorated by a florist with rare plants and flowers; and in front of the President's chair was placed a beautiful little palmetto tree in honor of the President, Mr. Gustavus J. Luhn, of South Carolina.

About 200 members were present, when the President called the meeting to order and introduced the Hon. Mr. Caven, Mayor of the city. The Mayor came forward and read an Address of Welcome, which was written in a studied and elaborate style.

After appointing the Committee on Credentials, the President proceeded to read the Annual Address, which was quite a lengthy document, embracing a full review of the operations of the Society for the past year, with various recommendations for the consideration of the present meeting.

At the conclusion of the address, invitations were received to visit the various public institutions of the city. Invitations were extended from almost all the prominent industrial interests of the city, and severally accepted. When invitations were read from several breweries, they excited great applause and laughter.

On motion of Henry J. Menninger, of Brooklyn, the following persons and societies were invited to attend the session of the Convention: The Governor and other State officers, judges of the Supreme Court, the Mayor, Medical College of Indiana, Central College of Physicians and Surgeons, and the Marion County Society of Microscopy.

At night, in the parlors of the Grand Hotel, a reception and *Microscopical Soiree* was tendered the members of the Association. Several hours were spent in social intercourse, and in viewing the many curious and beautiful objects prepared for examination under the lens. The microscopical display made was very fine. Five or six beautiful instruments of the most improved patterns were arranged on tables, exhibiting finely-mounted specimens of compound salts, and, in one instance, of sections cut from twenty different animals. In all, one hundred and twelve specimens were exhibited.

On the succeeding day, the Association met at 9:30 A. M. The first business after reading the minutes, was the report of the Nominating Committee, and then the election of officers for the ensuing year, resulting in part as follows:

President—Geo. W. Sloan, of Indianapolis, Ind.

First Vice-President—T. Roberts Baker, of Richmond, Va.

Second Vice-President—Joseph L. Lemberger, of Lebanon, Pa.

Third Vice-President—Phillip C. Candidus, of Mobile, Ala.

Treasurer—Chas. A. Tufts, of Dover, N. H.

Permanent Secretary—Prof. John M. Maisch, of Philadelphia, Pa.

Reporter on the Progress of Pharmacy.—C. Louis Diehl, of Louisville, Ky.

Chairman of the Executive Committee—Geo. W. Kennedy, Pottsville, Pa.

Chairman of the Committee on Queries and Papers—J. W. Lloyd, of Cincinnati, O.

Chairman of the Business Committee—A. J. Menninger, of Brooklyn, N. Y.

Chairman of the Committee on Prize Essays—C. Louis Diehl, of Louisville, Ky.

Chairman of the Committee on Legislation—Prof. John M. Maisch, of Philadelphia, Pa.

After the election of officers, the gentlemen for that purpose conducted the new President, Mr. Sloan, to the chair. The members were requested to rise while the retiring and incoming Presidents both made appropriate speeches. The three Vice Presidents, Messrs. Baker, Lemberger and Candidus, were then introduced, and thanked the Association in short addresses.

The regular reports of executive officers, such as those of the secretary, treasurer, etc., showed the condition of the Association to be very satisfactory except financially, which was caused by the difficulty experienced in collecting the annual dues. The report of the Executive Committee was very lengthy. It contained a description of the volume of proceedings for the last year, which is the largest ever published, containing over a thousand pages, of which six hundred and sixty-four are devoted to an elaborate report of the progress of pharmacy, by Prof. Diehl, of Louisville, Ky., besides the report of the Committee on the Revision of the Pharmacopœia, report of Dr. Ed. R. Squibb on Repercolation, etc., embracing also a report of membership showing over 1,100 members distributed over the United States and Canada.

Prof. Diehl read some extracts from his forthcoming report on the progress of pharmacy, the report being too voluminous to be read in full. Of the metric system, he said, that more than half the civilized world already favored it, although there are numerous and apparently well-grounded objections

to its use. The system has been adopted by the U. S. Marine Hospital Service, where its employment is enforced, which is the first decided step towards its adoption in this country. The *Popular Science Monthly* says that "ten is theoretically ill-suited for the radix system of notation, because it permits of only one bisection. The half of it is five and an odd number." It is also incapable of any other division. On account of these defects, it is ill adapted to the drug market. Notwithstanding these objections, the system is slowly but surely making its way. The production of the alloy iridis-platinum for the construction of international standards of weight and measure by the French Government, has been entrusted to Johnson and Matthey, of London. The compound is almost indestructible, and a beautiful polish may be given to it. He spoke of improvements in the manner of making cod liver oil emulsions with iodine, of dialyzed iron, suppositories, and of several new East India drugs now largely coming into use. With reference to the cinchona tree, he gave authorities showing that the fear that the supply is likely to fail is entirely groundless. New and immense forests have been opened in Bolivia and Ecuador, and there are other supplies to be had as the country is penetrated.

After the reading of some scientific papers by Prof. Remington, of Philadelphia, and the disposal of some routine business, the answers to regular queries were reached.

Query No. 1—*Eriodictyon Californicum*? Answer prepared by Charles Mohn, of Mobile, Ala. He had thoroughly investigated the plant, and furnished an analysis of it. He had arrived at the conclusion that the value of the medicine was due to its restoring and astringent effects on the bronchial tubes, but thought it had no decided value as a cure for consumption.

Of course, there is not space in this report to present or even to notice the many answers to queries which were read and discussed, but they were quite numerous, and developed a large amount of useful, practical and scientific information.

Prof. Diehl presented a voluminous report from the Committee on Revision of the Pharmacopœia (in the absence of the chairman of that committee), embracing various subdivisions. The report of the committee recommended a revision as to the following points: 1. A complete description of all drugs. 2d. A reconstruction of the chemical part in accordance with recent discoveries. 3d. A reconstruction of the pharmaceutical part. The manipulation of quantities is directed to be made by parts. But the report was entirely too

voluminous to be read, and therefore only extracts from it, typifying its general characteristics, were presented.

The last day of the session of the Association was chiefly occupied with the consideration of unfinished business, and in passing resolutions of thanks to the citizens, pharmacists and others of Indianapolis for their generous hospitality, after which the Association adjourned to meet at Saratoga Springs, N. Y., on the second Tuesday in September, 1880, in compliance with a petition signed by the pharmacists, citizens and hotel proprietors of that place.

Entertainments.—Prominent among the entertainments given by the pharmacists and druggists of Indianapolis to their visiting brethren, were a grand concert and hop at Menechor Hall on Wednesday evening, and a grand banquet on Thursday evening at the Grand Hotel. At the banquet, the following toasts were read, and responded to as follows:

1st. "The American Pharmaceutical Association." Responded to by T. Roberts Baker, of Richmond, Va. Mr. Baker gave a sketch of the origin and progress of the American Pharmaceutical Association from its organization in 1852 up to the present time. He described and explained its aims and objects, some of which were to elevate the standard of pharmacy and advance scientific research. Referring to its utility in a national point of view, he spoke of its voluminous book of proceedings which was annually published, being in all the principal libraries of the world, and used by statesmen and others as a book of reference in the construction and elaboration of laws bearing upon the importation of drugs and medicines, and regulating the sale thereof. He also spoke of the continued efforts of the Association, through their Committee on Legislation, by which they had secured the passage of pharmacy laws in thirteen States, and wound up by complimenting the ladies, and thanking the citizens and pharmacists of Indianapolis for their magnificent reception.

The second regular toast—"The American Medical Association"—was responded to by Dr. Theophilus Parvin, of Indianapolis, who, after expressing his pleasure in rising to respond to that toast, proceeded to show how closely the medical and pharmaceutical professions were united; and stated that, although the American Medical Association was older than the American Pharmaceutical Association (it having been organized in 1846), yet he had to admit that the pharmaceutical profession had made much more rapid progress than the medical. He declared that the physician and the pharmacist were brothers in one common struggle to free man-

kind from the curse of disease. And he closed by saying that, when we pass away, others will rise up and take our places.

Governor Hendricks then rose to reply to the next regular toast, which was "Indianapolis." After describing the natural, geographical and artificial advantages and attractions of the city, he paid his respects to the professions and industries. Of the lawyers, he had nothing to say, as it was generally understood that they could speak for themselves. The clergy he complimented, and said it was gratifying to know that some of them thought more of religion than they did of politics. He claimed that Indianapolis was not only the centre of the State, but of the whole country. He was glad to have heard objects of the Pharmaceutical Association explained, and should appreciate them better in future. Some people thought in regard to druggists that the lighter the weight and shorter the measure they gave, the better. He did not think so; but when he was sick, he placed himself in the hands of his friend, Dr. Parvin—threw himself on the old standard profession—and trusted a great deal to a good constitution.

The remaining toasts were responded to in short but very effective addresses, as follows: "The Ladies," by Mr. Joseph L. Lemberger, of Pennsylvania; and "Pharmaceutical Colleges," by Prof. F. H. Markoe, of Boston, Mass. [We regret not having space for synopses of their remarks.—Ed.]

It only remains now to speak of the *Exhibition*, which is always a prominent feature of these meetings, and which was held in Masonic Hall. The display of crude drugs, chemicals, pharmaceutical products, and everything pertaining to the professional and mercantile departments of pharmacy was very extensive in variety and elegance. Messrs. Lehn & Fink, of New York, exhibited among other things samples of *every known alkaloid*, and also of every known metal. Thirty-five firms had handsome exhibits, arranged with great taste, all of which were much enhanced in appearance by the most beautiful floral decorations. Messrs. Randolph & English, of Richmond, Va., made a beautiful exhibit of the products of their extensive druggists' pill and powder-box factory, which excited much flattering comment among the visitors.

Treatment of Colic.—Phares' method consists in *inversion*—simply in turning the patient upside down. Colic of several days' duration has been relieved by this means in a few minutes.—*Jour. des Sci. Med.*

Analyses, Selections, etc.

Mammary Tumors—Their Differential Diagnosis.—Dr. D. S. Adams, of Manchester, N. H., read before the New Hampshire Medical Society, June 17, 1877, a most excellent paper on this subject, of which we make a full abstract:

The mammary gland is surrounded by a thick layer of adipose tissue, held in position by reticulated connective tissue, which penetrates into the interior, subdividing it into lobes; but in the ultimate gland structure, and in the nipple and areola, there is no fatty substance. In this tissue, deep seated, at the inner and outer border, are lymphatic glands—the inner opening into the anterior mediastinal glands, the outer communicating with the axillary glands. These structures are derived from the middle germinal layer. The ultimate gland structure consists of small vesicles, which are united to form lobules, which are grouped to form lobes, each of which has a duct leading to the nipple. These glands are formed by the vesicular endings of branched ducts, and they, together with the ducts, are formed of connective tissue lined with a single layer of epithelium, which is greatly increased during lactation, thrown off into the gland, and undergoing fatty degeneration, form a part of the milk. They are derived from the external germinal layer. Surrounding the terminal ducts, is a spindle-celled tissue, which separates the limiting membrane from the stroma. This, I believe, is a mongrel tissue formed between the two germinal layers, and from this I think the spindle-celled sarcomata originate.

The nipple is composed of the ducts, united by connective tissue with blood-vessels, lymphatics and nerves. Upon the surface and beneath the cuticle, is a layer of pigment cells. The connective tissue contains a large quantity of contractile fibre, which, when excited to contract, produces a rigidity of the whole organ. Within the areola are situated hair follicles and sebaceous glands; hence, sebaceous tumors are occasionally developed in this region.

The 2d, 3d, 4th and 5th intercostal branches of the internal mammary artery usually convey blood to the internal segment of the breast; a branch from the axillary usually supplies the upper and outer portion, and the inferior and lateral regions receive a few branches from the intercostal, which pass with the veins through the middle intercostal foramina. The lobules have a distinct system of capillaries

of their own, forming a network around the alveoli, which are comparatively inactive during the resting period of the breast. The veins usually accompany the arteries and terminate in the internal mammary and axillary trunks. A peculiar arrangement of the areolar veins has received the name *circulus venosus areolæ*.

The breast, and skin covering the breast, are supplied by filaments from the anterior branches of the 4th and 5th cervical nerves. Filaments from the posterior branches of the same nerves join with others from the superior dorsal nerves. Filaments from the middle and anterior intercostal branches of the anterior division of the 2d, 3d, 4th and 5th nerves of the dorsal plexus supply the breast, and skin over it, chiefly. A minute examination demonstrates the association between the 2d intercostal and filaments supplying the skin of the inside of the arm and axilla; also, the same parts and the skin about the shoulders from the 3d, and the skin about the scapula from the 4th and 5th." (Holmes.) These nerve communications explain the extensive pain in hyperæsthesia of the breast.

I shall be obliged to deal with three conditions of the breast that are not, strictly speaking, tumors, on account of their symptoms so closely resembling those of tumors.

By *Galactocoele*, I understand an obstruction of the duct, whereby there is an accumulation of milk and dilatation or rupture of the gland or duct, which forms an encysted milky tumor, in one of the lobes of the breast.

Congestion with milk is caused by the absence of the more fluid portion of the milk, on account of which the solid portion accumulates in the ducts and glands, producing a lobulated tumor of stony hardness.

Chronic Encysted Abscess is the result of a low chronic inflammation, which results in the formation of pus, which is surrounded by a thick, dense, fibrous wall. This frequently reaches a certain size, and then remains stationary for months.

Adenoma is always in connection with secreting glands, and is the result of increased growth of the epithelium lining them, the layer of which is crowded inward by a new layer forming under it; and failing to undergo the fatty metamorphosis, fills up and dilates the gland, by which it may form new gland structure in some cases. The epithelial growth is always confined to the inner portion of the gland, and does not infect the surrounding tissue.

Adenoid Cyst is the result of the same process as above, occurring in one terminal gland, or as the result of the

breaking down of the intervening tissue between several glands—the tissue softening to form a mucous mass.

Soft Carcinoma is the result of an increased growth of the epithelium; but instead of being thrown off into the gland, it infects the leucocytes as they approach the epithelium through the lymphatic lacunæ, causing them to develop into epithelium, thus blocking up the immigration of the leucocytes, and filling the surrounding tissue with epithelial growth.

Hard Carcinoma is the result of the same process, with an increased growth of the fibrous tissue. The cells of both these, therefore, lie in the lymphatic lacunæ; and an abundance of cells occurs in the soft, whereas there is a limited number in the hard.

Sarcoma.—The spindle-celled, in my opinion, originates in connection with the spindle-celled tissue which separates the limiting membrane of the glands from the stroma. The round-celled has its origin in connection with the lymphatic spaces in the connective tissue, by an increased growth of the endothelium lining them, together with an increased growth of the connective tissue.

Cysto-sarcoma is the same process—only the endothelial growth takes place in one of the lymphatic spaces dilating it, or in several, breaking down the intervening tissue between them—the endothelium softening in the former into a serous fluid; in the latter, into a cloudy serous fluid. And if a gland be implicated, in the latter, into a muco-serous fluid, in which case the tumor may possess both round and spindle-celled tissue. The first of these is the simple sero-cyst of some authors.

Fibroma is a simple increase of the connective tissue, without the infiltrating cells, confined to a limited portion of the breast, and is exceedingly rare.

Lipoma is an encysted fatty tumor, arising in connection with the adipose tissue of the breast.

Neuroma arises in connection with the nerve tissue, producing a bulbous enlargement of the nerve, and is composed of newly-formed nerve-fibre and ganglionic cells.

Enchondroma and *Osteoma* probably take their origin in connection with the connective tissue, or as a degeneration of some of the other tumors. But little is known in reference to their origin in this situation on account of their rarity.

Hydatid Cyst explains itself, and presents the ordinary characters of a deep-seated cyst.

Can one form of a tumor begin in the breast, and after a

time change, or take on another form? I think this sometimes occurs; for instance, an adenoma may be confined for months to the inner portion of the gland, when, from some renewed action, it blocks up the immigrating leucocytes, and infects the surrounding tissue, and results in a *soft carcinoma*. Also, the sarcoma may form independently of the gland, and, later involve the gland so as to produce a mixed tumor; or most any of the hard tumors may undergo mucous or serous degeneration, forming a cyst; or a cartilaginous or an osseous growth may become an *enchondroma* or *osteoma*.

These tumors are auto-inoculable just in proportion as their epithelium is taken up by the lymphatics; consequently, the soft carcinoma is the most dangerous, the hard next, and the spindle-celled sarcoma next, provided they all remain in the system the same length of time. Broken down epithelium is more poisonous when taken into the blood than any other tissue in the system. I do not consider the round-celled sarcoma, or any of the other tumors above enumerated, as auto-inoculable, unless the glands and epithelial tissue become involved in them.

The adipose tissue is a great hindrance to our physical examination, for the most important tumors are usually deep-seated, and the thick layer of fat so masks them in some places that it is utterly impossible to tell whether they are smooth and hard, nodulated, elastic, single or multiple. Then the more characteristic symptoms do not appear till late in the disease, and the surgeon that waits for infection of the surrounding glands for the retracted nipple with the implication of the skin over the breast, or for the adhesion of the mass to the subjacent tissues, is only allowing his patient to slip beyond his reach into the stage of general infection, for which there is no help. But there are some points that aid us very much in our diagnosis, especially in distinguishing between carcinomata and other tumors.

First among these, probably, is age, for about 95 per cent. of all carcinomata of the breast begin after the age of thirty; so if the patient be under that age, the chances are largely against carcinoma. The majority of the cases of sarcoma, and nearly all the fibromata, begin after the age of thirty, while about sixty-two per cent. of the cases of adenoma begin under the age of thirty. But in connection with this we must bear in mind that years and days do not truly represent the age of the patient, as it should be considered here; for one woman may be older at twenty-five than another at thirty-five, and is, therefore, more liable to have carcinoma;

consequently, the question should be asked, "Is this woman prematurely old, or postmaturely young?"

Next: Was this bunch developed during the passive state of the breast, or during its functional activity? If developed during its functional activity, it is probably either galactoele, congestion with milk, or chronic abscess, although the latter may not occur for months after a delivery. It is only in cases of abortion where the woman tries to conceal the fact are we apt to be misled on these diseases; but general activity of local circulation, fulness of the breast, enlargement of its veins and darkening of the areola, with more or less activity of the other breast, will usually enable us to decide.

If developed during the passive state of the breast, did it follow active inflammation, or has the breast apparently been free from inflammation? If the result of the former, it is probably an abscess or benign tumor, for the more active forms of inflammation rarely result in the malignant tumor.

Again: Is it a solid tumor or a cyst? In some cases, we are able to decide this by the elastic feel of the tumor, but more commonly when the tumor is deep seated we are unable to detect any elastic feel; but, fortunately, puncture never fails to decide, and when punctured with the harpoon, if it proves solid, you can remove a piece for the microscope. This instrument ought to be used where there is any doubt.

In the physical examination of the breast, we are often aided very much by placing the patient in a recumbent position, with the breast free to tip one way or the other, or to settle back on to the chest; for frequently it will divide, as it were, over the tumor, leaving that more prominent and nearer the surface than while standing. Is the tumor single or multiple? When multiple, we can sometimes roll one tumor on the other. If multiple, the worst it can be is sarcoma, for carcinoma is never double. Is the nipple attached to the tumor or free? By pressing the breast forward over the tumor, and with the fingers of one hand pressing the tumor back against the chest, while we pull upon the nipple with the other hand, we are frequently able to decide by the fixed condition of the nipple. If it be attached to the tumor, the tumor is in connection with the glands or ducts; if free, it cannot be in connection with them on account of their close anatomical connection with the nipple. Is there any discharge from the nipple, or can any be pressed out? If there can be, we know it contains fluid within the glands or ducts. Is it painful, or not? We should let the patient describe the pain in her own language. If the pain be lanc-

nating, darting or stabbing, extending up to the shoulder and down the arm, it points strongly to hard carcinoma; but if it be free from pain, it is no guarantee against carcinoma, for carcinoma may exist without pain. Learn if the patient has been reading about cancer, for frequently after reading the symptoms she will imagine the disease, and give the doctor the full list of symptoms.

In the following table I have classed all the symptoms as one, as there is nothing to distinguish one from another except the microscopical characters of the walls, and its position in reference to the gland; thus, if entirely free from the gland, it must be a sarcomatous cyst. Also, I have omitted fibroma, lipoma, neuroma, enchondroma and osteoma, as they are all exceedingly rare, and the last two are frequently the result of change in some other tumor.

Fibroma, in its earlier stages, has all the external characteristics of hard carcinoma, and can only be distinguished by the microscope; even this is very difficult in some cases.

Lipoma is entirely free from the gland, and presents the microscopical characteristics of adipose tissue.

Neuroma is usually very small, and may be very painful, while the surgeon is unable to find any tumor whatever. The tenderness of the nerve affected, when pressed upon, will be of some diagnostic value.

From the table, we learn that retraction of the nipple is common to all tumors which implicate the glands or ducts, and is the result of inflammation and contraction of the connective tissue surrounding the ducts. This does not always take place; retraction is more or less accidental.

Hardness is common to all tumors of the breast, except soft carcinoma and sarcoma, and it may occur in connection with sarcoma. All the tumors may be irregular in shape, giving a nodulated feel. Later in the disease, if it be carcinoma, the severer symptoms become intensified; hence, it is not difficult to determine that our patient is beyond help; so our knowledge is of no benefit. But, fortunately, the harpoon and microscope enable us to determine the character of these tumors in their earlier stages, and always ought to be used, and the sooner they are used the better; but my observation would tell me that they are not in general use. The use of the harpoon cannot possibly do any harm in connection with these tumors; for, if it prove a benign tumor, or cyst, the inflammation following its use will frequently cure it. When the surgeon has no harpoon, a narrow-bladed knife and small pair of forceps will answer the same purpose; and if local anæsthesia be used, the operation is painless.

TABLE OF THE DIFFERENTIAL

GALACTOCELE.	CONGESTION WITH MILK.	CHRONIC ENCYSTED ABSCESS.	ADENOMA.
1. During the child bearing period and the result of pregnancy.	1. During the child bearing period and the result of pregnancy.	1. During the child bearing period usually and generally the result of pregnancy.	1. Majority of cases under the age of thirty.
2. No pain.	2. Some dull pain sometimes, but not common.	2. No pain.	2. If painful, pain dull and most severe at catamenial period.
3. System not disturbed.	3. System considerably disturbed.	3. System not disturbed.	3. System not much disturbed.
4. Breast considerably enlarged.	4. Breast very much enlarged.	4. Breast not much enlarged.	4. Breast slightly enlarged.
5. Local circulation active in both breasts.	5. Local circulation active in both breasts.	5. Local circulation some increased in both breasts.	5. Local circulation some increased in the breast affected.
6. Tumor quite a size but if it has been in the breast long it is not as large as it was, on account of the more fluid portion being absorbed, but harder.	6. Tumor large and lobulated.	6. Usually small and irregular in shape.	6. Tumors small and nodulated.
7. May give an elastic feel or fluctuation, or be hard.	7. Stony hard.	7. May give an elastic feel, otherwise hard.	7. Moderately hard
8. Single.	8. Single.	8. Single.	8. May be single or double.
9. Nipple may or may not be connected with the tumor. If a simple dilatation has taken place it is connected. If a rupture it may not be.	9. Nipple always connected with tumor.	9. Nipple may or may not be connected with the tumor; usually is.	9. Nipple always connected with tumors
10. Freely movable.	10. Not freely movable.	10. Not freely movable.	10. Freely movable.
11. Skin distended over it.	11. Skin distended over it.	11. More or less œdema of the areola.	11. Skin normal, unless tumor has reached considerable size.
12. Growth rapid; Tumor fills every time the child nurses, then gradually subsides.	12. Growth rapid to a certain size then stationary.	12. Growth slow.	12. Growth slow under the age of thirty, after that rapid.

DIAGNOSIS OF MAMMARY TUMORS.

SOFT CARCINOMA.	HARD CARCINOMA.	SARCOMA.	PRIMARY CYST.
1. Very rare under the age of thirty.	1. Very rare under the age of thirty.	1. Majority in patients over thirty.	1. At any age above puberty. Majority under thirty.
2. May or may not be painful, not usually till skin is implicated, then pain severe and cutting, running to shoulder and down the arms.	2. Usually not painful, till skin is implicated, then pain severe, cutting or stabbing, running to shoulder and down the arm.	2. May or may not be painful.	2. Not painful usually.
3. System considerably disturbed.	3. System not much disturbed.	3. System usually some disturbed.	3. System not disturbed.
4. Breast some enlarged and enlarges rapidly.	4. Breast normal at first.	4. Breast slightly enlarged.	4. Breast appears normal.
5. Local circulation some increased, in breast affected.	5. Local circulation apparently normal.	5. Local circulation slightly increased in breast affected.	5. Local circulation normal.
6. Tumor quite size, irregular, and not well defined.	6. Tumor small and smooth or nodulated.	6. Tumor quite size and irregular.	6. Tumor small and may be nodulated.
7. Usually soft with a doughy feel.	7. Tumor hard.	7. Tumor a little soft	7. May give an elastic feel, otherwise hard, and may be finely nodulated.
8. Single, but lobulated feel may give the feel of a multiple tumor, but you cannot roll one tumor on the other.	8. Single.	8. Usually single.	8. Frequently multiple, and when so, can readily roll one tumor on the other.
9. Nipple always connected with tumor	9. Nipple always connected with tumor.	9. Nipple may or may not be connected with tumor.	9. Nipples may or may not be connected with tumor.
10. Freely movable at first, but soon becomes adherent.	10. Freely movable at first.	10. Not freely movable.	10. But little movable when deep seated.
11. Skin normal at first but implicated early.	11. Skin normal 'till late in disease.	11. Skin normal.	11. Skin normal.
12. Growth rapid.	12. Growth slow.	12. Growth usually rapid.	12. Growth slow and may remain small for years, then grow very rapidly. May have a vegetation spring from its wall, forming the compound cyst.

TABLE OF THE DIFFERENTIAL

GALACTOCELE.	CONGESTED WITH MILK.	CHRONIC ENCYSTED ABSCESS.	ADENOMA.
13. Nipple never retracted.	13. Nipple usually retracted or embedded in the breast.	13. Nipple usually flattened or retracted.	13. Nipple projects.
14. Surrounding glands never implicated.	14. Surrounding glands never implicated, but may be some swollen.	14. Surrounding glands may be some swollen.	14. Surrounding glands never implicated.
15. Superficial veins enlarged in both breasts.	15. Superficial veins enlarged in both breasts.	15. Superficial veins may or may not be enlarged.	15. Superficial veins usually enlarged.
16. Puncture; cheesy mass or cream.	16. Puncture; cheesy mass or cream.	16. Puncture, pus.	16. Puncture; solid.
17. Microscope, milk or fat globules, with more or less epithelial cells undergoing fatty degeneration.	17. Microscope the same as preceding.	17. Microscope, pus corpuscles.	17. Microscope, epithelial cells if taken from the interior of the acini, otherwise may get connective tissue.

Anti-Toothache.—Mr. James Merson, L. D. S., writes to the *Brit. Jour. Dental Science*, that acute pain can often be suppressed by pungent aromatics, just as we know essential oils are popular remedies for toothache, as are creosote, peppers, spirits, etc. But, better still, he tells us that, combined with chloroform and aconite, they will prevent the pain of tooth extraction. Hundreds of patients told him they did not feel the pain. Here is his formula for a local anæsthetic to supersede chloroform, ether, the gas, etc.:

R. Chloroform, pur..... $\overline{5}$ ij.
 Tr. aconiti (Fleming's)..... $\overline{5}$ ij.
 Tr. capsici..... $\overline{5}$ j.
 Tr. pyrethri..... $\overline{5}$ ss.
 Ol. caryoph..... $\overline{5}$ ss.
 Pulv. camph..... $\overline{5}$ ss.

Mix.

The tooth and surrounding gums are to be previously dried, and then four or five drops of this applied with cotton wool. Then without delay use the forceps, but the instrument must be warmed. This is most important. For toothache, a pellet of cotton wool soaked in the above, may be introduced into the cavity, and is said often to give speedy relief.—*The Doctor.*—*Atlanta Med. and Surgical Journal*, September, 1879.

Bichloride of Methylene, it is stated, has been administered as the anæsthetic for surgical operations in over 100,000 cases in England without, as yet, a single evil result.

DIAGNOSIS OF MAMMARY TUMORS.

SOFT CARCINOMA.	HARD CARCINOMA.	SARCOMA.	PRIMARY CYST.
13. Nipple projects at first, but soon becomes retracted.	13. Nipple normal at first, may or may not be retracted later.	13. Nipple may or may not be retracted.	13. Nipple may or may not be retracted; is not usually.
14. Surrounding glands soon implicated as the growth is rapid.	14. Surrounding glands not implicated till late in disease.	14. Surrounding glands never implicated.	14. Surrounding glands never implicated.
15. Superficial veins enlarged early.	15. Superficial veins not enlarged till late in disease.	15. Superficial veins may or may not be enlarged.	15. Superficial veins may or may not be enlarged.
16. Puncture; tumor soft, but no discharge.	16. Puncture; solid.	16. Puncture; solid.	16. Puncture; fluid.
17. Epithelial cells arranged in alveoli with no connective tissues separating alveoli separated by well marked connective tissue bundles.	17. Same as soft, except more connective tissue and less cells. Arrangement of cells the same.	17. Spindle-shaped cells characteristic. If it be round-celled, the cells resemble epithelial cells.	17. If primary, the walls are simple connective or gland tissue. If secondary, same character as tumor from which it was formed.

Wounds of Joints Treated with Powdered Aloes.—M. E. Millet, in the *Arch. Med. de Belge*, recommends the treatment of articular wounds by powdered aloes. In imitation of the veterinary surgeons, who treat articular wounds in the horse with the best success by means of the aloes powder, M. M. tried it on the human subject, in a case where the index finger had been torn off through the metacarpo-phalangeal articulation and connected with the hand only by a strip of skin. The finger was placed on a splint covered with wadding, the aloes powder thickly strewn over it, where it melted by the heat of the hand, and formed an air-tight covering, and the whole fastened to the splint with a narrow tape, without compress or sharpie. The success was complete; a useful finger the result; the dressing changed but twice in a fortnight; there was no fever, no pain, and scarcely any suppuration. The pain ceased immediately on the application of the powder.—*Gaz. Hebdom.*, July 14, 1879—*St. Louis Courier of Medicine*, Sept., 1879.

Treatment of Inflammation of the Eye.—Dr. J. E. Horn, of West Manchester, O., reports in the *Cincinnati Lancet and Clinic*, Sept. 27, 1879, excellent results from the use of the following:

R_x. Morph. sulphat.....gr. iij
 Zinci sulphat.....gr. ij
 Aq. distillat.....ʒj

M. S. Apply two drops directly to the eye every three hours. The proportion of zinc sulphate in the above prescription may be increased to grains iij or more if required. Dr. Horn has used this prescription "always with good success" in a number of cases of acute and subacute inflammation of the eye.

Book Notices, &c.

Publishers and Authors having complimentary copies of their publications for distribution, are invited to contribute such as they can spare to the library of the Richmond Academy of Medicine, where they will be brought to the attention of a large body of influential medical men. Dr. E. T. Robinson, Richmond, Va., Librarian, etc.

Les Tumeurs Adenoides der Pharynx Nasal. (Adenoid Tumors of the Pharyngo-Nasal Region.) Par le Dr. B. LOEWENBERG, Paris. V. Adrien Delahaye et Cie. 8vo. Pp. 75. (By mail from the Author.)

In the little monograph before us, Dr. Loewenberg gives an admirable account of adenoid tumors of the naso-pharynx. No doubt the majority of general practitioners have been in the habit of confounding these growths with nasal polypi proper, or, as Dr. Loewenberg terms them, "fibrous" naso-pharyngeal polypi. He calls attention to the fact that the mucous membrane of the nasal pharynx is very rich in follicles, especially around the openings of the Eustachian tubes, and on the posterior wall of the pharynx. Around the openings of the Eustachian tubes, indeed, the follicles are so abundant, that the structure has been termed by Luschka, the pharyngeal tonsil. These, then, are the most usual situations of the adenoid growths, which consist of a net-work of fine fibres filled with lymphatic cells, and very liberally supplied with blood-vessels.

Certain symptoms, such as nasal respiration, defective hearing, and the habit of holding the mouth constantly open, are strongly suggestive of growths in the nasal cavity and pharynx, but a definite opinion can only be formed after careful examination with the finger and the rhinoscope. Dr. Loewenberg acknowledges that in many cases it is extremely difficult to make a diagnosis between adenoid growths and fibrous polypi of the naso-pharynx. The former usually occur in persons past middle life, and are much larger as a rule than adenoid formations, which usually occur in young subjects. The course of the two forms of morbid growth are essentially different. Fibrous naso-pharyngeal polypi are progressive in their course till they finally fill the nasal pharyngeal cavities, and give rise to the most terrible consequences. Adenoid tumors, on the other hand, show no tendency to "invade or destroy the surrounding tissues." (P. 50.) Numbers of surgeons have remarked on the great mortality

of the one growth, and the relative harmlessness of the other adenoid tumors being readily and permanently cured.

With reference to treatment, he says that in a large majority of cases it is advisable to use remedies to build up the general health; but local measures are by far the most important. These consist in (1) cauterization, and (2) ablation.

1. Cauterizations, if persisted in, will nearly always bring about a cure, but it requires a long time, and they are only to be recommended when the patient will not submit to an operation. The caustic usually employed consists of one part of nitrate of silver and two parts of nitrate of potash. Tepid salt water should be used by the nasal douche, and as a gargle after cauterizations.

2. Ablation is much the most certain and prompt method of treatment, and may be practised in a variety of ways which Dr. Loewenberg describes in detail.

W. C. D.

Etude Historique et Clinique sur la Trepanation du Crane; la Trepanation Guidee par les Localisations Cerebralis. (Historical and Clinical Study of Trephining the Skull: the Site of Trephining being Selected According to Cerebral Localizations.) Par le Dr. JUST. LUCAS-CHAMPIONNIERE, Surgeon of the Hospitals of Paris; Member de la Société de Chirurgie, etc., Paris. V. A. Delahaye et Cie. 8vo. Pp. 150. (From Publishers.)

This book is an outgrowth of the doctrine of cerebral localizations advanced by Fritz and Hitzig, Ferrier, Chareot and others—although the author gives a very complete history of trepanning and the results of the operation in addition. His studies of the subject have extended over a period of several years, and translations of some of his papers have heretofore appeared in the pages of the *Medical Monthly*.

The work before us is divided into eleven chapters, treating respectively of (1) Trepanning in prehistoric times, and among modern savages. (2) Modern opinions on trepanning in wounds of the head. (3) Case of fracture without communicating wound—localized symptoms, trepanning and cure. (4) Influence of cerebral localizations on trepanning. (5) Motor centres in the cerebral cortex and their sect. (6) Report of cases and treatment—cases occurring during the American civil war. (7) Nature and form of paralysis observed in wounds of the head. (8) Topography of the motor region of the cranium. (9) Indications for surgical treatment in wounds of the head. (10) Prognosis and treatment of wounds caused by the trepan. (11) Appendix—review of works on cerebral localizations.

M. Lucas-Championniere is an earnest advocate for the

use of the trepan, the seat of the paralysis being taken as a guide to the seat of the cerebral lesion, and he gives a number of figures in his book exhibiting the locations of the motor centres, and the points of the cranium corresponding with them. We have heretofore given a detailed description of his method of determining these points. See numbers of the *Medical Monthly* for May, 1877, and January, 1878.

The book is, altogether, a most useful one, and as the subjects of the different chapters show, it enters fully into the discussion of trepanning in all its relations.

Physiology and Histology of the Cerebral Convolutions—Also Poisons of the Intellect. By CHAS. RICHET, A. M., M. D., Ph. D., Former Interne of the Hospital of Paris. Translated by EDWARD P. FOWLER, M. D., New York. Wm. Wood & Co. 1879. 8vo. Pp. 170. (From Publishers.)

This work, as the Translator states it, is a "natural complement to Charcot's *Localization in Diseases of the Brain*." After describing the structure, vessels and development of the convolutions, Dr. Richet passes to a study of their physiology, which section is replete with important details that should be carefully studied in order to understand the various disorders of intellection. As might be surmised, the author's researches have led him to the conclusion that the convolutions are the seat of intelligence.

As regards the second division of the book—an abridgement of a small monograph upon *Poisons of the Intellect*—we may say that it would well repay separate republication as a tract, to be widely distributed among the laity as well as the profession. The special poisons of which he treats are alcohol, chloroform (which the author classes with alcohol), haschisch, opium and coffee. The dangers of the popular uses of each of these articles are well seated, without over-drawing the picture in any particular, and without any extreme expressions. This section of the book contains simply a plain statement of facts, confirmed by experience, which, if known generally, might result in good.

Clinical Medicine: A Systematic Treatise of Diagnosis and Treatment of Diseases. By AUSTIN FLINT, M. D., Professor of the Principles and Practice of Medicine, and of Clinical Medicine in the Bellevue Hospital Medical College, etc. Philadelphia: Henry C. Lea. 1879. 8vo. Pp. 795. (For sale by Messrs. West, Johnston & Co., Richmond.)

In America, no practitioner has done more to advance the study of Medicine than the author of the book now before

us Already the author of a half dozen or more works pertaining to the practice of medicine, and although still an active practitioner and a diligent professor in one of the most ably equipped medical colleges in this country, he again comes forward with another "systematic treatise," which is, perhaps, the most useful of all the books he has written. What a commentary is such a life upon the lives of many other able and experienced practitioners, who have, in reality, less to do in practice, and nothing professionally, and yet "cannot find time" to contribute even short notes of their eventful lives to the pages of a medical journal!

It has been a frequent complaint on the part of the readers of several of the other published works of Prof. Flint, that he has dealt too much with the physical signs of disease, and too little with the symptoms, and especially too little with the treatment of diseases, for the ordinary run of practitioners. Whatever foundation for such a complaint, on the part of students more particularly—forgetting that there was also a separate chair of Therapeutics, etc.—may have been found in Dr. Flint's well-known *Treatise on the Principles and Practice of Medicine*, no such objection can be urged against this volume of *Clinical Medicine*. This latter work treats almost entirely, in about equal divisions as to space, of *diagnosis and treatment*—the two essentials to the every day practitioner.

While the present work is in no manner intended to supersede the systematic works on the principles and practice of medicine, it is, as it is intended to be, a most valuable supplemental book to such a treatise as has just been referred to. Particularly would we call attention to the fact that the section on diseases of the nervous system occupies the largest space of any of the six into which the book is divided. And this amount of appropriation of space arises chiefly from the great advances which have of late years been made in this province, and consequently its increased importance. A consideration of mental affections is also included in this section.

The pressure upon our columns just now—especially in the department of Book Notices—prevents any attempt at a critical analysis of Dr. Flint's *Clinical Medicine*. But after a thorough examination of the work with reference to its value to practitioners, we may add that—although when we examine the catalogues of publishers, there might seem to be enough works on the practice of medicine and on clinical medicine to satisfy every demand, and although the authors of many of these volumes are themselves excellent practi-

tioners and careful compilers of the records of other physicians—there is yet no one book with which we are acquainted that supplants the present one in practical every day value.

A Guide to Surgical Diagnosis. By CHRISTOPHER HEATH, F. R. C. S., Holme Professor of Clinical Surgery in University College, London, and Surgeon to University College Hospital, etc. Philadelphia: Lindsay & Blakiston. 1879. 12mo. Cloth. Pp. 214. Price, \$1.50. (For sale by Messrs. West, Johnston & Co., Richmond.)

This is one of the most useful books that we have lately examined. It is what its title says it is. It is an *essential* to the clinical professor, the practitioner and the clinical student. It is of special practical value to the young graduate who undertakes the diagnosis of his earlier surgical cases with "fear and trembling." While the author has fully met his design, like all people who get a good thing, we wish the design had been of more universal range in surgical diagnosis. The surgical affections of which diagnosis are given are arranged anatomically as far as possible, and the symptoms of each morbid condition are arranged "in the order in which they would strike a pains-taking observer." Besides a complete index, the marginal titles on each page, such as are found in most law publications, etc., very materially assist in making a hurried reference to any subject treated of.

Materia Medica and Therapeutics—Vegetable Kingdom. By CHARLES D. F. PHILLIPS, M. D., F. R. C. S. E., Lecturer on Materia Medica, Westminster Hospital, London. Edited and Adapted to the U. S. Pharmacopœia, by Henry G. Piffard, A. M., M. D., Professor of Dermatology, University of the City of New York, etc. New York: Wm. Wood & Co. 1879. 8vo. Pp. 323. (From Publishers.)

This is another of those remarkably cheap and valuable works of "Wood's Library of Standard Medical Authors," which we have been noticing this year each month upon issue. As the title indicates, this book treats only of the articles of the materia medica which belong to the vegetable kingdom. The editor has considerably condensed the original by omitting the botanical descriptions of drugs, and by omitting a few sections on the more unimportant articles. But he has included, in his editorial work, a consideration of a few drugs not referred to by the author—some of indigenous and others of foreign origin, such as gelseminum, hamamelis, iris versicolor, viola tricolor, jaborandi, euphrasia officinalis, nitro-glycerine, etc.

Although the original work was published (1874) before

the virtues of salicin as an anti-rheumatic was known to the profession, it is a singular omission that the editor, who adds so many practically valuable notes to various other articles, makes no mention of this now recognized special virtue of the active principle of willow bark. Nor do we find any reference made to the value of gelseminum in aiding the dilatability of the cervix uteri when locally applied in cases of slow labor due to tension of the cervix. Dr. Piffard is an author of a work on skin diseases, and as an authority in that department of medical practice, is eminent. His notes regarding several drugs in his book, so far as they are used in dermatological practice, are instructive, and are, no doubt, of importance. But being more of a specialist in his studies than a *general* practitioner, we might have expected, as we do in reality find, that his annotations would relate chiefly to drugs in their application to skin diseases.

The Law of Therapeutics; or the Science and Art of Medicine. By JOSEPH KIDD, M. D., Philadelphia: Lindsay & Blakiston. 1879. 12mo. Pp. 196. Cloth. Price, \$1.25. (For sale by Messrs. West, Johnston & Co., Richmond.)

There are many useful lessons to be learned from a perusal of this book. Like bigots in religious denominational convictions, there are sectarians in medicine. It is an unwarranted contraction of views on the part of some of the "regular" profession to suppose that there is nothing of value to be learned from a study of the doctrines which are professed by certain limited schools of practice. So far has this prejudice gone on the part of some of our "regular" school of practitioners—unfortunately too many—that there is danger of their becoming as exclusive on the one side, as the homœopaths, eclectics, etc., are on the other. It is a fatal error in religion, politics or medicine to become exclusionists. Let certain members of the regular profession beware that they do not fall into the same error of obstinate exclusiveness that they condemn in others who are of different schools.

The foundation doctrines of the "regular" profession is the admission of *truth* in medicine—from whatever source it emanates. Dr. Kidd's little book seems to be an effort to stay the tide of exclusiveness in every school of practice, and "to forget men and their systems, and to search for truth."

As stated in the *London Practitioner*, March, 1879, "Dr. Kidd acknowledges two laws—that of *contraria cōtraries*, and *similia similibus*; but * * * like a sensible practitioner, he does not allow himself blindly to follow either the one or the

other, but seeks out the cause of the disease, and tries by rational measures to remove it. The cases are the most valuable part of the book. Yet we think that it would have been much better not to mention by name certain physicians whose plans of treatment were ineffectual."

Medical and Surgical History of the War of the Rebellion.

Part II, Volume I. Medical History—Being the Second Medical Volume. Prepared under the direction of Joseph K. Barnes, M. D., Surgeon-General U. S. Army, by JOSEPH JANVIER WOODWARD, M. D., Surgeon U. S. Army. First Issue. Washington: Government Printing Office. 1879. 4to. Pp. 869. (From Surgeon-General U. S. Army.)

This entire volume treats simply of "alvine fluxes"—diarrhoas and dysenteries of all kinds. To practitioners, it is of incalculable value—far exceeding in importance to them all three of the former volumes put together. The amount and accuracy of work done by Dr. Woodward in getting up this volume is marvelous. Section I gives statistical remarks: Section II contains reports and extracts relating to diarrhoea and dysentery; Section III details the morbid appearances observed in fatal cases of diarrhoea and dysentery, and Section IV has remarks on the pathology and treatment of these diseased conditions. Of course, the work is admirably indexed, etc. To attempt more than to give this general outline of the work in our limited space, would be doing an injustice to the author and ourselves.

We wish our subscribers to remember, however, that this book is not for sale, nor is it for distribution by the Surgeon-General. But each Congressman is entitled to a certain number of copies of the volume for distribution to physicians of his district. We trust each one of our subscribers will take the hint here thrown out, and apply *at once* to his respective Congressman for a copy. If he is successful in securing a copy, he will be thankful to us for the suggestion, and will "never regret" having the book as his property.

Students' Guide to the Diseases of Women. By ALFRED LEWIS GALABIN, M. A., M. D., F. R. C. P., Assistant Obstetric Physician, and Joint Obstetric Lecturer on Obstetric Medicine to Guy's Hospital, etc. With 63 Illustrations. Philadelphia; Lindsay & Blakiston. 1879 12mo. Pp. 370. Cloth. Price, \$2. (For sale by West, Johnston & Co. Richmond.)

The great number of books on diseases of woman lately published and soon to be issued, makes us cautious how we recommend each one that comes under notice. It is not that

most of these writers are not good authorities, nor that their writings are not systematic and reliable; but it is simply impossible for the great majority of the profession to possess all, or even a half, of the works on the subject. Since we have no space in which to attempt an analytical notice, we will sum up our advice: Every practitioner should have an exhaustive work on gynæcology; and, in addition, a hand-book for general reference—to serve simply as a guide-book. For this latter purpose, Dr. Galabin's work is very good. Among the subjects usually treated of in larger works, omitted in this, are extra-uterine fœtation, retroversion of the pregnant womb, descriptions of the operations for ruptured perineum, for vesico-vaginal fistula, for Battey's operation, etc. In regard to the value of the "Drysdale cell," in view of the correspondence lately held in this journal, we should state that it is no longer considered *pathognomonic* of ovarian fluid.

A Guide to Therapeutics and Materia Medica. By ROBERT FARQUHARSON, M. D., F. R. C. P., Lond., Lecturer on Materia Medica at St. Mary's Hospital Medical School, etc. Second American Edition, Revised by the Author, Enlarged and Adapted to the U. S. Pharmacopœia by FRANK WOODBURY, M. D., Physician to the German Hospital, Philadelphia: Henry C. Lea, 1879. 12mo. Pp. 498. (For sale by Messrs. West, Johnston & Co., Richmond.)

As we predicted in noticing the first edition of this work, the labors of Dr. Farquharson have been cordially appreciated in this country. The descriptions of drugs are all brief, and the physiological effects and therapeutical uses are placed in opposite columns. The present edition is a great improvement over the first in being more comprehensive. Descriptions of several new drugs have been given, new therapeutic headings discussed, and reference given to all recent experiments, etc. The American Editor has added many useful notes, embodying the latest revision of the U. S. Pharmacopœia, together with the antidotes to the more prominent poisons, and some of the newest remedies. A table of "Therapeutic Suggestions, or Index of Diseases," is appended to the volume, which gives it special value as a ready reference book. The work is cordially recommended.

PAMPHLETS, REPRINTS, ETC., RECEIVED for which we have no room for further notice; but most of which can be obtained by enclosing a letter stamp for each pamphlet to the respective authors named.

Dermatitis Venenata; or Rhus Toxicodendron, and its Actions.

- By ROSWELL PARK, A. M., M. D., Assistant to Chair of Anatomy, Chicago Medical College, etc., 785 Wabash Avenue, Chicago, Ill. Pp. 8. (Reprinted from *Archives of Dermatology*, July, 1879.)
- Recent Advances in our Knowledge of Kidney Diseases.* By WM. D. BIZZELL, M. D., Mobile, Ala. Read before the Medical Association of the State of Alabama, at Selma. Pp. 55. (Extract from the *Transactions*, etc., 1879.)
- Use of Solid Rubber Bandages in the Treatment of Eczema and Ulcers of the Leg.* By L. DUNCAN BULKLEY, A. M., M. D., Physician to the Skin Department, Demilt Dispensary, New York, N. Y., etc. Read before the New Hampshire Medical Society, 1878. Pp. 21 (Reprint from *Archives of Dermatology*, July, 1878.)
- Diet and Hygiene in Diseases of the Skin.* By same author. Pp. 18. (Reprint from *Va. Med. Monthly*, October, 1878.)
- Ophthalmic Notes.* (1) *Trephining the Cornea to Remove a Foreign Body Deeply Embedded in its Substance.* (2) *Case of Double, Extremely Minute and Apparently Congenital Lachrymal Fistula* (3) *Contribution to the Statistics of Cataract Extraction of 118 Recent Cases.* By C. R. AGNEW, M. D., New York, N. Y. Pp. 30.
- Method for Performing Post-Mortem Examinations.* Issued by the North Carolina Board of Health. Pp. 32. (Address not given.)
- Yellow Fever Germ on Coast and Inland.* A Discussion of Ship and Railroad Quarantine before the Medical Association of Georgia, at Rome, Ga., 1879. By HENRY FRASER CAMPBELL, M. D., Augusta, Ga., Chairman of the Committee on Endemic, Epidemic and Contagious Diseases in the Board of Health of the State of Georgia. Pp. 26. (Reprint from *Transactions*, etc.)

Editorial.

Dr. Henry F. Campbell, of Augusta, Ga., is another of our distinguished subscribers whose engraving and biographical sketch we shall soon publish. The exact issue in which the publication will appear will be hereafter stated. The more than national eminence of Dr. Campbell as a medical author and original investigator, and the immense circle of personal friends which he has in each section of the United States especially, will make this selection for our next biographical publication peculiarly gratifying to our readers.

Dr. J. Marion Sims has returned to his home in New York to re-enter practice there. He was in attendance upon the session in Baltimore of the American Gynæcological Society, and was looking remarkably well. His book, for which the entire profession is longing, will be published early in 1880.

Hypodermic Injection of Morphia.—Dr. H. H. Kane, of 366 Bleecker street, New York city, who has for some time past been collecting statistics on the hypodermic injection of morphia, would consider it a great favor if members of the profession who have had experience with the instrument will answer the following questions:

1. What is your usual dose?
2. Do you use it alone or with atropia?
3. What is the largest amount you have ever administered?
4. Have you had inflammation or abscess at the point of puncture?
5. Have you had any deaths or accidents caused by this instrument?
- 6 Do you know of any cases of opium habit thus contracted?

Where there has been an autopsy (5) please state the fact, and the results obtained therefrom. All communications will be considered strictly confidential, the writer's name being used only when he gives his full consent thereto.

Phosphorole, a combination of pure phosphorus with pure cod liver oil, although introduced by Messrs. Billings, Clapp & Co., of Boston, Mass., scarcely a year ago, has already proven in the practice of many of the profession who have tested it what such a combination theoretically promised to be—a most important remedy, especially in the incipency of phthisis. The editor has, in addition, tested it in cases of neurasthenia, and nothing but good has been the result.

Colden's Liebig's Liquid Extract of Beef has acquired a popularity that seems deserved as a nutritive tonic and stimulant. As the formula (which is furnished physicians) would indicate, it contains both vegetable and ferruginous tonics in just such proportion as is most acceptable to the delicate stomachs of many dyspeptics. It is fast becoming a popular substitute for what is usually called "*bitters*" by the people; and the substitution should be further encouraged by the profession. In the case of Colden's Extract, the ingredients are not withheld from the knowledge of physicians; whereas in the case of "*bitters*," no one besides the proprietor knows of

what trash it is composed. Fuller information is contained in article by Dr. W. A. Greene, which is to be found in the advertising department.

The Medical Society of Virginia will convene at 7½ P. M. Tuesday, October 21st, in Sarepta Hall, Alexandria, Va. It promises to be the very best session ever held. Dr. J. Marion Sims, of New York, H. P. C. Wilson, of Baltimore, and a large number of other distinguished visitors from other States, have promised to attend. All Virginia doctors should join and be present.

A Course of Lectures on Diseases of the Skin will be delivered by Dr. L. Duncan Bulkley, in the Pathological Amphitheatre of the New York Hospital, New York city, on Wednesday afternoons, commencing Wednesday, October 8th, 1879. The course will consist of 24 lectures, and will be *free* to practitioners of medicine and medical students.

Obituary Record.

Mr. H. L. Stuart is dead. This noble philanthropist should not be permitted to pass away without a tribute from the medical press. He was born in Vermont, in 1816, but at an early age moved to New York, where he spent his active and useful life. A remarkable and touching feature connected with his history is that he died in Athens, Ga., and was buried by the side of Dr. Crawford W. Long, whose memory he was zealous to perpetuate as the great discoverer of surgical anæsthesia. To Dr. J. Marion Sims is due the credit of having first called the attention of Mr. Stuart to this fact in the history of Dr. Long. Mr. Stuart, at his own expense, presented a life-size portrait of Dr. Long to the Alumni Association of the Georgia University, one to the New York College, and one to the Art Gallery at Washington. He came to Georgia a few weeks ago, and was present when his portrait was accepted by the Legislature of the State. On his way home, he came to Athens to visit Dr. Long's family, and to see the grave of the distinguished physician. He arrived there on the 29th of August. The next day he was stricken with paralysis, and after a lingering state of semi-consciousness, he died on the 16th of September, in Dr. Long's house. At the request of the latter's family, his wife consented that he be permanently buried by the side of Dr. Long. And now they sleep together, side by side, on the banks of the Oconee.

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Original Communications.

ART. I.—**The Terminology of So-called Rubeola, not Roseola.**
By BENJ. H. RIGGS, M. D., Selma, Ala.

There seems to be such a wide spread confusion with regard to the use of the above names, in medical books, by the profession and among the people, that I am prompted to make this effort at clearing their nosology.

There prevailed in Selma and vicinity during the past cold months, an epidemic contagious exanthem which the doctors and the people called "*roseola*." It was very wide spread among the children and youths; and even attacked a number of adults. I had in my practice a half dozen adults, between thirty and forty-five years of age, who had it, and had it severely. All of them had previously had measles, and one had previously had measles and scarlet fever, and yet had "*roseola*" very severely. This disease resembled measles in many particulars, and differed radically from it in others. In some points—the sore eyes, sore throat, glandular involvement, bronchitis, ophthalmia, and other serious sequellæ—it resembled scarlatina.

As I said before, this disease is generally called *roseola*. It strikes me that this is a misnomer. There is no authority for terming a *serious contagious exanthem* *roseola*. We will examine the authorities on the subject which are in my li-

brary. The nomenclature of the *Royal College of Physicians*, of London, page 82, makes the term roseola to include "roseola æstiva, roseola autumnalis, roseola symptomatica, and roseola annulata," and no others. In Wood's *Practice of Medicine*, volume second, page 411, scarlet rash or roseola "is defined to be a rose-colored efflorescence, variously figured, without wheals or pimples, and not contagious."

Prof. Wood says, "Dr. Willan, with an unnecessary nicety, has made seven distinct varieties of roseola, founded on the season at which the disease is most apt to occur—(R. æstiva and R. autumnalis); on the form of the eruption (R. annulata); on the age of the patient (R. infantilis); or on the disease of which it is an attendant (R. variolosa, R. vaccini, and R. miliaris)." Evidently Prof. Wood's definition of roseola makes the name perfectly inapplicable to our epidemic.

Dunglison's *Medical Dictionary* gives about the same definition to roseola as Prof. Wood, and names a few additional varieties, and says, "and is of no consequence." He defines *roseol(æ)*, however, to be a different disease, and describes very well, under this name, the epidemic under consideration.

Aitken, in his *Science and Practice of Medicine*, does not treat of roseola at all as a distinct disease; neither does Watson in his work on the *Practice of Medicine*. Niemeyer, in his *Text-Book of Practical Medicine*, treats of rose rash, which Wood calls roseola, as roseola febrilis, which is not the same disease as Wood's rose-rash at all, as we will see further on. He says, on page 405, "Typhoid fever, the typhoid stage of cholera, and other infectious disorders, are accompanied by roseola; but it also is by no means rare, in the febrile, gastric, and intestinal catarrhs of children, as well as in the inflammatory diseases of the brain and lungs. When we can discover a cause for the fever, we call the roseola a symptomatic roseola; when no cause for the fever can be found, the eruption is said to be idiopathic. To the latter class belong the so-called roseola (æ)stiva, roseola autumnalis, roseola infantilis, and some of the affections entitled measles (rötheln)."

In Meigs, on *Diseases of Children*, roseola is spoken of

as "a non-contagious, fugacious exanthem, characterized by rose-colored patches of irregular size and shape; which are unaccompanied by elevations or papules, and the appearance of which is preceded and accompanied by febrile symptoms. It is often called in this country, scarlet rash; and under that title, is supposed to constitute a very mild form of scarlatina. It is sometimes called also *French measles*, and *roseola sine catarrho*. There are three forms of the disease met with in children, viz.: *roseola æstiva*, *roseola autumnalis*, and *roseola annulata*."

There is much confusion in the above description.

Duhring, in *Diseases of the Skin*, defines roseola in this wise: "Certain general diseases are at times accompanied with hyperæmia of the skin, which shows itself in the form of roundish spots, the size of a pea or finger-nail, to which the term roseola has been given. It denotes simply the peculiar form of the erythema; it in no degree indicates the nature of the disease which has brought it forth. Thus, roseola is employed to express one of the first lesions of syphilis upon the skin, and also the erythema which is sometimes observed in connection with vaccinia, or with variolo." p. 137.

It clearly appears from the above account of roseola that it is a very simple, yet very varied disease, and that it has a tolerably clear significance. It does not seem to me, however, that this name suits the disease I have given some account of in this paper; nor that it is the same disease as the somewhat formidable one which is known as rötheln (German measles, French measles, and by Ziemssen and Aitken as rubeola, and by Niemeyer as rose-rash, *roseola febrilis*, *rubeola scarlatinosa*, and *rubeola morbillosa*), for these all seem to be the same disease. There is no doubt, in my mind, that there does exist this specific contagious exanthem; and Thomas says, on page 133, 2d volume Ziemssen, "The number of the advocates of the distinctness and contagiousness of rubeola has of late markedly increased, and there is a general effort to establish symptoms by which it may be as perfectly as possible characterized and permanently distinguished from non-specific forms of roseola, as well as from measles and scarlet fever, with a somewhat anomalous exanthem.

Among the older adherents of an independent and specific rubeola, I mention especially Wagner and Trousseau; but, since the beginning of 1860, the specific nature of rubeola has been defended decidedly and with ever increasing success by Thierfelder, deMan, Hening, Dnais, Veale, Mettenheimer, Lindwurm and Arnold, A. Vogel, Wunderlich, Dunlop, Squire, Gerhardt, Emminghaus, Kuster, and myself."

Niemeyer speaks of it as "rose-rash, *roseola febrilis*," and says, "Carmstatt aptly defines rose-rash as an eruption with red spots (an entirely different disease from Wood's rose-rash), concerning which, from its general symptoms and the affections of the mucous membranes, we are in doubt whether it should be classed with scarlatina, measles, urticaria, or erythema, as it resembles one or the other of these diseases in some points, while differing in others. Epidemic roseola arising from infection (which alone we shall discuss here) from unknown causes, consists in modifications of scarlet fever or measles. By rubeola scarlatinosa, we mean a scarlet fever where the exanthem resembles measles; while the high fever, the throat affection and the dropsy, which often follows, resemble the course of scarlatina. By rubeola morbillosa is meant a form of measles where the exanthema is confluent and resembles that of scarlatina; while the affection of the respiratory mucous membrane, and the escape of the pharyngeal mucous membrane leave no doubt of the morbillous nature of the disease."

The above, I think, is a very confused statement of the pathology, and Thomas states that he has not been able to trace any resemblance to scarlatina in his observation of rubeola. I think, however, that Aitken's idea of hybridity is sustained by my observations of the epidemic in Selma last winter.

Dunghlison describes this same disease under the name of *roseolæ*—false or French measles—as "midway between measles and scarlatina, and which belongs to neither one nor the other, as it affords no protection against either. It is also termed rubeolæ by some, and rubeoloid, a term which is applicable to any eruption resembling rubeola" (measles).

Aitken describes this disease as a "hybrid of measles and

scarlet fever," and gives as its synonyms "(Latin) rubeola," "(German) rötheln—(a German synonym for erysipelas is rothlauf)." He says, "all authors before Laurages (1768) had used the term morbilli (the term now in use) to designate measles; but he adopted a new name, and called measles by the designation of rubeola—an innovation which has caused much confusion, having been adopted by some, such as by Willan and Bateman, and rejected by others. Hildebrand, following the old nomenclature, calls measles, morbilli, and scarlet fever, scarlatina, and terms the disease now about to be considered, rubeola, as has been done by Dr. Copeland."

Thomas, in Volume II of *Ziemssen's Cyclopædia*, treats of "rubeola, rötheln, German measles," page 135, as "a contagious and essentially epidemic, and therefore specific and infectious exanthem, to which the name rubeola can alone be properly applied."

On page 133, he says "that later observers, adducing facts from their own experiences, are forced to assume an *independent rubeola*."

It is to be regretted that there is such confusion in the nomenclature of skin diseases, and it is as an effort to simplify these that I contribute this paper. The names roseola, rubeola and morbilli are much confused. We term rubeola, roseola, in America; and measles, we style rubeola. In England and on the continent of Europe, roseola is a simple symptomatic skin rash; measles is termed morbilli; and this rötheln is called rubeola by most authors. But rubeola is not known in the nomenclature of the Royal College at all; nor is the disease that is so termed. In American dictionaries and encyclopædias, measles is known as rubeola.

There is a necessity for naming this disease which Aitken calls a "hybrid;" and its old name seems to have been rubeola; roseola as most generally defined does not suit the disease. Again, we must use the name morbilli for measles. In this way we simplify matters and erect a more scientific system of terminology.

Rubeola, perhaps, bears to morbilli about the same relation that varicella bears to variola; each resemble the other, but each of the former is milder than the latter respectively named.

I do not know why we may not have hybridity in disease as well as elsewhere in nature. May not the contagium vivum, the living germs of disease, cross and beget occasionally a permanent new species just as we see in the vegetable and animal kingdoms? Who knows the true nature of the microrymes, and understands the full resources of the invisible kingdoms of the air around us? In the animal kingdom the setter dog is a fruitful hybrid, and we find the same illustrated more abundantly in the vegetable world. But be it a hybrid or not, it is a distinct disease in my opinion, and not a roseola, not the measles, not scarlet fever. The disease is worthy of careful observation on the part of all within whose view it may come.

The treatment of this disease is not essentially different from that of measles; and the prognosis is not generally so grave as in the latter disease; though more grave than in the roseolous diseases. We had last winter in Selma some deaths from bronchitis and entero-colitis, which were, as the people styled them, "relapses from roseola."

Aitken says of the prognosis, on page 323, "It requires to be as guarded as in scarlatina; for like scarlatina, rubeola is often an extremely and rapidly fatal disorder."

Thus much as a contribution to the study of a disease which has not received that attention in this country which its importance deserves.

ART. II.—**Drinks, Food, Bathing, Exercise, Clothing and Treatment in Diabetes Mellitus.*** By J. H. SALISBURY, A. M., M. D., Cleveland, Ohio.

DRINKS.—Drink one-half pint of beef tea, made from pure lean meat fibre, free from tendon, cartilage and fat, at each meal, and the same amount between two hours after breakfast and one hour before dinner, between two hours after dinner and one hour before supper, and between two hours after supper and one hour before breakfast the next morning—making in all three pints of beef tea in the twenty-four hours. Take no other drinks of any kind or description, unless it be a few mouthfuls of clear tea or coffee with the med-

*Extract from a paper, ready for the press, on the "Cause and Treatment of Diabetes Mellitus."

icine. To quench thirst, put into each half-pint of beef tea five grains of nitrate of potassa.

Food.—Eat broiled beefsteak which has been entirely freed from fat, tendon, cartilage and bone, before cooking. Have it seasoned to taste with butter, pepper and salt. For variety, use the steaks (broiled) which are cut from the centre of the round of a lamb or mutton, broiled oysters, broiled fish that are free from fat, broiled quail, broiled woodcock, broiled partridge, broiled grouse and broiled codfish. The whites of eggs may be taken raw or soft boiled occasionally with the meat. Use butter, pepper and salt for seasoning. Worcestershire and Halford sauces may be used on the meats if desired. This lean-meat diet and the drinks should be rigidly followed out for at least two or three months, or longer if the healthy functions of the liver and kidney are not by that time fully restored and established, so that the diseased conditions do not return by departures from the lean-meat diet.

The urine should flow at the rate of three pints daily, and stand at or near a density of 1.020. This state of things should be present continuously for five or six weeks before bread and vegetable food should be ventured upon. When it is thought the right time has arrived, begin by allowing the patient one mouthful of bread at each meal. Take this bread after the meat is eaten. If after a few days the urine continues to remain at 1.020 density, or thereabouts, and flows at the rate of three pints only in twenty-four hours, increase the bread to two mouthfuls at each meal. In this way, advance gradually and cautiously, step by step, till at the end of four or five weeks the patient is taking two parts of lean meat to one of bread, toast, boiled rice, cracked wheat or potato. Keep up this kind of diet in the above proportions continuously for the following six months, before fruits (except the lemon) are ventured upon. A little lemon juice on the meats, or after meals, may be indulged in at any time during the progress in the cure. After the patient is sufficiently recovered to take, with safety, one part of bread, toast, boiled rice, cracked wheat or potato, to two of the meat, half a pint of clear tea or coffee may be substituted for

the beef tea at each meal. During the entire treatment, all sweets, pies, greens, cakes, vinegar, pickles, sauce, preserves, puddings, soups, crackers, crullers, cheese, milk, mush, cream, fruits and vegetables should be rigidly avoided.

BATHS.—Take a soap and hot-water bath twice a week for cleanliness, after which oil all over with sweet oil and glycerine, rubbing in well. Every night or day, sponge all over with hot water, in which put from half to an ounce of aqua ammonia to the quart of water; rub in well and wipe dry afterward. Every day put a teaspoonful of dilute nitro-muriatic acid in six ounces of hot water, and rub in thoroughly over the region of the liver. Keep this up till a miliary eruption appears, when stop it till eruption disappears; then resume it again till eruption again shows itself, and so on during the progress of cure.

CLOTHING.—Wear flannel or silk next the skin, and dress comfortably warm. On retiring, change all clothing worn during the day, so that it may be thoroughly aired for the following morning. Keep the clothing sweet and clean by changing every other day. The bed should be thrown open on rising, and the bedding well aired during the day, and the bed not made up till it is time to retire.

EXERCISE.—Ride and walk daily in the open air as much as possible, without fatigue. Four to six hours in the twenty-four should be spent in this way. If not able to walk or ride, the body and limbs should be rubbed and pounded all over for twenty minutes, morning, noon and night, by some one who has strength to do it thoroughly.

MEALS.—The meals should be taken at regular intervals, and it is better not to sit down at a table where others are indulging in all kinds of food. Eat alone or with those only who are on the same kind of diet. After the system gets in good running order, which is indicated by the urine flowing at the rate of from three to four pints daily, and standing at a density of from 1.020 to 1.026; the appetite becomes good, and often ravenous. Frequently, in this state of the cure, more than three meals a day are desired. This desire should be gratified by allowing the patient a nice broiled steak between breakfast and dinner and dinner and supper. These

extra meals should be taken at fixed and regular hours every day.

TREATMENT.—Just before each meal, the patient should take a small dose of some good, bracing tonic. As the bowels are almost uniformly constipated in this disease, this medicine should have a laxative tendency, without increasing the activity of the liver. Here the good judgment of the physician will be brought in play. If the system is debilitated and the patient is nervous and wakeful, with considerable emaciation and constipated bowels, something like the following would be appropriate :

R _y . Fluid ext. lettuce.....	℥j
“ “ ladies slipper.....	℥iij
“ “ cinchona comp.....	℥ij
“ “ aromatic	℥j
“ “ golden seal	℥j
“ “ digitalis.....	℥j
“ “ apple-root bark.....	℥ijss
“ “ rhubarb.....	℥jss
Oil menth. pip.....	gtt. x
Oil gaultheria.....	gtt. x

M. S. Take a teaspoonful before each meal.

R_y. Salicin

℥j

S. Take six grains immediately after each meal.

R_y. Benson's capcine porous plaster.

S. Apply to back, over kidneys.

If the gases that pass from the bowels are offensive with the sulphide of ammonium and sulphide of hydrogen, indicating decay in the contents of large intestines, give the following :

R _y . Carbolic acid (pure white crystal).....	℥j
Water.....	℥xvj
Oil menth. pip.....	gtt. xvj

M. S. Take a teaspoonful fifteen minutes after each meal.

To assist in increasing the activity of blood glands, and to act as food in making bone, nerve and muscle, give as follows :

R _y . Hypophosphite of iron	gr. x
“ “ soda	℥ss
“ “ potassa	℥j
“ “ lime.....	℥ss

Mix, and make pills No. xxx.

S. Take a pill after breakfast and dinner.

To sweeten the bowels, correct acidity; to invigorate the entire organism, and to prevent the debilitating influence of the interstitial death and decay of cells and fibres, give as follows:

R. Spts. ammonia aromatic..... $\bar{5}$ vj

S. Take a teaspoonful in each half pint of beef tea drunk between meals.

To keep the bowels open, use a pill that acts as a tonic to the entire intestinal tract, without stimulating directly the liver. Something like the following would be appropriate:

R. Aloes socot..... $\bar{9}$ j.
 Gum myrrh $\bar{9}$ j.
 Piperine.....grs. xxv.
 Ext. henbane.....grs. vj.
 Ext. colocynth.....grs. xxv.
 Ext. rhubarb.....grs. xv.
 Oil menth. pip.....gtt. xij.

Mix, and make pills No. xxx.

S. Take part, or a whole pill, or more, if necessary, on retiring.

If there is irritation of the rectum and lower bowel, use as follows:

R. Carbolic acid (pure white crystal)..... $\bar{5}$ ss.
 Butter cocoa, oil sweet almonds and
 white wax, \overline{aa} , q. s. to make supposito-
 ries.....No. xviii.

S. Insert one in rectum every night.

GENERAL REMARKS.—Avoid all anodynes and other medicinal agents that tend to get the stomach, bowels, kidneys and skin out of order. The cure is accomplished by removing the unhealthy alimentation that has culminated in the disease, and in aiding the removal of the pathological states of the deranged organs by the use of such remedial agents as assist in restoring normal healthy action.

By judiciously and persistently following out the foregoing plan of alimentation, treatment, etc., the diseased organs and system generally soon begin to take on a more and more healthy state. The urine contains every succeeding day less and less sugar, its density becomes less and less, the quantity decreases, the color heightens, the appetite improves, the eyes become brighter and brighter, the skin loses gradually its

dryness, and becomes more and more soft and oily, and the mucous membranes less and less feverish and dry; the thirst ceases and the entire organism takes on little by little, yet certainly and surely, the actual appearances, states and conditions of health.

In less than one week's time after this treatment is thoroughly entered upon, the quantity of urine decreases from gallons to about two quarts; the density falls from 1.040 to 1.060 down to 1.026 to 1.034, varying with the advancement and severity of the disease. The thirst usually ceases in about three days, after which the sufferings of the patient are comparatively slight.

The slightest deviation in the patient from the course marked out, can be detected by the watchful and expert physician at once. A single mouthful of bread, vegetables, fruit, sauce, sugar, or any fermenting farinaceous or saccharine food will elevate the density of the urine many degrees by increasing the sugar in it, and the quantity voided will be much greater. The physician should be able to detect at once any departures of the patient, and call him to strict account. No one need hope to handle this disease successfully without a rigid observance of the foregoing rules and regulations.

Medicines alone will not cure the disease. They are only aids in restoring healthy states after the cause, or the unhealthy alimentation is removed. None but careless feeders ever have this disease, unless as in rare instances it may be imperfectly developed by local injuries. As the desires and appetites of the patient have to be entirely ignored, the physician must endeavor to so inspire his patient that his soul and body will be in the good work. Unless he can do this, his patient will stealthily yield to the awful cravings of a diseased appetite, too often, to permit a cure possible. The patient can tear down more in one minute by indulging in the forbidden, than the physician can put up in three days. Hence you see the odds are with the patient in his downward course, unless the physician can inspire him with such a sense of duty and responsibility to himself, that the feeling of doing right, under every and all circumstances, will override the cravings of diseased desires and appetites.

Diseases in organs, which arise from defective or unhealthy alimentation, are the result of confirmed habits in eating too exclusively and continuously food, which, in the way and proportion in which it is taken, cannot be well digested; consequently it is unfitted for assimilation. The chemical and vital changes of fermentation, decay, and cryptogamic development set in, resulting in the production of agents debilitating and poisonous to the various vital organs which they reach, by being more or less taken up by the gland cells of the digestive apparatus.

These desires are pathological habits in the organ or organs affected, and have been brought on by being continuously compelled to do and to be exposed to labors unfitted for it or them to perform or endure, without becoming more or less over-taxed, enervated, deranged, paralyzed and changed in function, and eventually in structure.

To produce these states, conditions and changes, requires time and persistent and continued exposure to the before-mentioned abnormal causes and labors. To cure them, also, requires time and the persistent and continued avoidance of all causes producing them, and the constant and unflinching use of such food and medicinal means as will keep the system constantly and continuously in the most perfect running order. This is indicated by the urine flowing at the rate of about three pints daily, standing at a density of 1.020, clear, no sediment being deposited on cooling, and no sugar, albumen, or other pathological body or condition present; the bowels moving once or twice a day, and at the regular time; no pains or aches; head clear, no dizziness; skin and mucous membranes in good order; mind cheerful, and all the normal functions going on in a healthy manner.

In this disease, the lobules of the liver or that portion of the gland which is connected directly with the blood-vessels, and which organizes glycogenic matter or animal sugar, is the part that is directly involved. This portion of the liver is too active, and makes more animal sugar than is required. This excess has to be eliminated, and the kidneys have this additional work to do. Soon they, too, become over active, and little by little become involved *indirectly* in the disease.

To effect a cure, we must cut off all food (as far as possible) that goes to make animal sugar. This includes vegetable food, fruits, animal fats, tendon and connective or glue tissue and cartilage. Also all excess in drinks. This lessens the labor of the diseased parts, and little by little, their excessive activity ceases, and normal states ensue, which, if persisted in for a few months, breaks up the diseased habit; normal conditions are restored and become permanent, and the disease is cured.

ART. III.—**Moral Insanity.** By REV. WILLIAM KIRKUS, LL. D., Baltimore, Md. (Read before Baltimore Medical and Surgical Society, February 5th, 1879.)

There is something startling and ominous to thoughtful people in these mere words. They indicate an entire revolution, both in psychology and ethics. Hitherto morality has been supposed to be inseparable from a sound mind. Insanity—a real and genuine insanity—has been considered a dissolution of all moral obligation; just as deafness relieves a man from the obligation of hearing, or blindness from the obligation of seeing. We have been accustomed to regard the words of Holy Scripture, that what a man does is “accepted according to what he has, not according to what he has not,” as a divine confirmation of a universal moral instinct. We must invert all our moral judgments if an *insane* man can be treated as morally responsible; or if a man who perfectly well *understands* the difference between right and wrong can be treated as insane, simply because *he does not govern his conduct* with any regard to that difference.

It is not the object of this paper to discuss the foundations and general tendencies of the prevalent materialism of which “moral insanity” is a particular case. The language which is common to all civilized nations is surely the expression of a universal belief as to the meaning of a universal experience. In all civilized languages, the different *words*, mind and matter, soul and body, freedom and necessity, spirit and nature, stand for wholly different and mutually exclusive *things*. Each of these pairs of words is the name of all existing things

except those for which the other is a name. Everything which is not mind, for instance, is matter; for, in the last analysis, even force and matter are names of the same physical phenomena viewed from different sides. Or, rather, *force* is a personification derived from the ineradicable belief in the separate existence of *mind*.*

"We resolve all the facts of nature," says Mr. Bain, the great apostle of a cerebral or physiological psychology (in his work on *Mind and Body*, pp. 124, 125), "ultimately into two kinds—matter and mind; and we do not resolve these into anything higher. We come upon a wider contrast at this point than we had in any prior stage of our generalizing movement. The plants and animals differ widely in their details; both differ widely from inanimate matter. Yet they agree in all the principal features of material bodies; and are in total opposition to mind, which has neither the distinctive features of either, nor the common attributes of both. The inanimate and the animate are not so different as body and mind.

"Extension is but the first of a long series of properties—all present in matter, all absent in mind. Inertia cannot belong to a pleasure, a pain, an idea, as experienced in the consciousness; it can belong only to the physical accompaniments of mind, the overt acts of volition, and the manifestations of feeling. Inertia is accompanied with gravity and peculiar material property. So, color is a truly material property; it cannot attach to a feeling, properly so-called, a pleasure or a pain. These three properties are the basis of matter; to them are superadded *form, motion, position*, and a host of other properties expressed in terms of these: attractions and repulsions, hardness, elasticity, cohesion, crystallization, heat, light, electricity, chemical properties, organized properties (in special kinds of matter)."

Mr. Bain's own theory of the connection between mind and body will seem to many thoughtful readers entirely inconsistent with these admissions. Thus, for instance, he describes the (hypothetical) "mechanism of *retention*" (*Mind and Body*, p. 91).

"By every act of memory, every exercise of bodily aptitude, every habit, recollection, train of ideas, there is a speci-

*See the admirable essays of Dr. James Martineau on "*Modern Materialism; its Attitude towards Theology*;" in *The Contemporary Review*, February and March, 1876.

fic grouping, or co-ordination of sensations and movement, by virtue of specific growth in the cell functions."

This theory might be less startling, not to say absurd, if memory were a late acquisition in mental experience; if it were a slow process or growth. But the very first act of memory is as perfect as the very last—the memory of a baby as the memory of Lord Macaulay. It begins with life itself; it is the condition of consciousness. All consciousness, Mr. Bain assures us, in all sorts of phrases, and with great copiousness of illustration, implies *change*. But the change it self, which produces consciousness, implies *memory*; you are only conscious of *change* by remembering the previous state. The interval of time may be infinitesimal; but there is an interval. In the life of every human being there is a first experience, a second experience, and the memory of the first experience, and the perception of the difference between the two; and all these are inextricably blended together in what may be considered the very first clear state of consciousness. Or to express it otherwise, there is the "I," the "self," and its inward or outward manifestations. There is this perfect personality in the first moment of every human being's life, long before any "mechanism of retention" could possibly be constructed. The first link is as mysterious, though it is not so big, as the whole chain. "The mechanism of retention," if there be any, must *follow*, on Mr. Bain's theory, and be produced by that very retentiveness which it is invented to produce. It is like an immense net-work of telegraph wires, first constructing themselves, next constructing a multitude of station, and last of all, creating an *operator*.

But, I repeat, it is not my object to examine the claims of modern materialism. To most people who have been trained in the older metaphysics, "physiological psychology" is an expression which has as much meaning as a blue thought or an elliptical passion. Nor have the minute anatomy of the brain and clever theories about "the mechanism of retention" advanced in the slightest degree the true science of the mind; or furnished any atom of assistance for the guidance of mental operation. The physiology of respiration and digestion is proved true by all kinds of practical applications.

The "physiology of the mind" will be proved true when we can pass, not hypothetically from known mental operations to possible "specific growths in the cell functions," but back again from the "cell functions" to operations of the mind.

But whether true or false, materialism, advocated as it is by our leaders in every department of physical science, cannot possibly be inoperative. Nor is it at all surprising that its practical effects become first apparent in the treatment of disease. If intellect and morality are functions of the brain, it is idle to punish folly and vice with contempt and suffering. Drunkenness, lust, dishonesty, are not sins, but diseases. Religion, patriotism, genius, are the necessary products of a peculiar temperament, but have no merit. Moreover, every vice that has cursed the world is hereditary, and often lurks under apparently innocent forms of bodily disturbance—as murder under epilepsy. Our new philosophy treats Redemption, indeed, with contempt; but it has demonstrated with a terrible stringency the doctrine of original sin.

I propose to examine a particular case of this new fashion of thought, which confounds the mind itself with certain functions of the body, and which classifies wickedness and crime among bodily diseases. And I shall treat this particular case, viz.: Modern theories of insanity and especially of "moral insanity," on three sides only—their practical effect on the treatment of crime, on civil liberty, and on the morals of society—for this subject lies wholly within the competency of any man of average education.

To ascertain the physical accompaniments or even causes of insanity, requires the trained skill of the anatomist and physiologist; but in ordinary life we are concerned, not with the causes, but with the insanity itself. The homicidal maniac must be locked up, if not hanged, whatever may be the condition of his brain or spinal cord, and whether his mania be original or inherited. His madness, if he be mad, can be determined by any ordinary jury; and the evidence of "experts," if admissible at all *as such*, should be confined strictly to a statement of *observed facts*, separated entirely from any physiological or pathological theory which those facts might, by a physician, be supposed to justify. Thus Baron Bram-

well, in charging a jury, said that "they must be satisfied from the evidence that these were cases of *insanity*. Although medical men were often heard in courts of justice to define insanity, he thought ordinary men of the world were just as well qualified to form an opinion as they were."

Speaking of the "moral insanity" of Prichard, Dr. A. S. Taylor remarks:

"It does not seem probable that moral insanity as thus defined," *i. e.*, an insanity manifested simply by a perverted or disordered state of the feelings, passions and emotions, irrespective of any apparent intellectual aberration, "ever existed or can exist in any person without greater or less disturbance of the intellectual faculties. * * * * The intellectual disturbance may be sometimes difficult of detection, but in every case of true insanity it is more or less present: and it would be a highly dangerous practice to pronounce a person insane, when some evidence of its existence was not forthcoming. The law does not recognize moral insanity as an independent state: hence, however perverted the affections, moral feelings, or sentiments may be, a medical jurist must always look for some indications of disturbed reason.

Medically speaking, there are, according to Dr. Prichard, two forms of insanity, moral and intellectual; but in law there is only one—that which affects the *mind*. Moral insanity is not admitted as a bar to responsibility for civil or criminal acts, except in so far as it may be accompanied by *intellectual* disturbance. The late Dr. Mayo denied its existence, and contended that no abnormal state of mind should confer irresponsibility, unless it involved intellectual as well as moral perversion. (*Medical Testimony*, p. 69.) The late Sir B. Brodie also considered that there were no reasonable grounds for admitting this to be an independent form of insanity. There has been, as he suggests, much mystification on the subject. The term has been applied to cases to which the name of insanity ought not to have been applied at all—*i. e.*, to 'moral depravity,' and also to cases in which delusions have really existed, and which might, therefore, have been more properly classed with cases of ordinary mental aberration. (*Psychological Inquiries*, p. 99.)

Of one fact we may be well assured: if in these cases of alleged *moral* insanity, there is no indication of a perversion of intellect, *medical* evidence is not required to determine the degree of responsibility in reference to these persons. Those who administer the law, and any man endowed with plain

common-sense, will be as well qualified as a medical expert to decide this question. Further, until medical men can produce a clear and well-defined distinction between moral depravity and moral insanity, such a doctrine, employed as it has been, for the exculpation of persons charged with crime, should be rejected as inadmissible." (*Medical Jurisprudence*, ii, 479, second edition, 1873.)

These opinions will certainly commend themselves to all persons who regard the safety of society as far more important than a compact and consistent medical theory. In the administration of criminal law, the great object is the protection of society, which must be protected from criminals who are mad, as carefully as from criminals who are sane. At the same time, it is essential that these two classes should never be confounded. The latter must never be allowed to shield themselves from punishment by hiding themselves among the former. For the insane cannot justly be punished—they can only be restrained; and the restraint will only be continued as long as the insanity, which is its only justification, exists.

Now for all purposes of practical justice, the existing *legal* definitions and *judicial* decisions have been amply sufficient hitherto. Very few insane murderers have been hanged; and probably not one as to whose guilt there was the shadow of a doubt. Such persons, therefore, though public morality—not yet under the control of materialism—would have certainly saved them from the gallows, would probably have been placed under perpetual restraint through the whole or greater part of a miserable life. And, at the worst, it is a far less evil that a homicidal maniac should be hanged than that he should be turned loose upon society. For the alternative would be that, instead of one dangerous lunatic being safely put to death in a manner comparatively painless, and with every alleviation that a human civilization could devise, many sane and innocent persons would probably be butchered with every accompaniment of horror, and by an executioner whose very disease is a brutal or fiendship indifference to human suffering and human life.*

*"A writer, who in 1865 visited Broadmoor," a large asylum established by the British Government for criminal lunatics, "found there 400 men and about 60 women, and he calculated that the victims of their united crimes amounted to nearly 1,000 persons." Taylor, ii, 566.

Now the first practical evil resulting from the modern and extravagant theory of moral insanity is, that it has already entirely unsettled the administration of the criminal law in every case in which the plea of insanity can be ventured upon. This plea is very frequently offered in trials for murders; there is no medical reason whatever why it should not be offered with equal or greater frequency in trials for theft or rape. A rich man, with a considerable number of friends and family connections, must be really insane if he has not sense enough to obtain "experts" who will prove that he has been "eccentric," or had "fits," which were, if not epileptic, at least, epileptiform; or had some ancestor epileptic, or "dipsomaniac," or eccentric, or a deaf-mute; or had suffered some severe shock from wounded affection or broken fortunes; or had been, from his earliest childhood, so irreclaimable a scoundrel that nothing but insanity could account for his outrageous vices. Not one of these facts, if proved, nor all of them put together, would amount to *legal* evidence of insanity. But the medical expert declares the prisoner insane—that is to say, morally insane—insane according to an improved hypothesis, lying quite outside of medical science, not even accepted as yet by *all* those who have devoted special study to mental pathology. He misleads the jury by using the very word which is most material to the matter which they are examining in that very sense which it is their duty to exclude most carefully from their thoughts. They are sworn to give a verdict according to *law*; the medical expert persuades them to give a verdict which he perfectly well knows is *not* according to law. He does all he can to induce them to acquit a criminal on the ground of insanity, though he perfectly well knows that, according to the only tests and definitions which the jury are, by law and by their oaths, allowed to consider, the prisoner is most assuredly *not* insane.

Now this mode of legislating, not by deliberation in Congress, but by perjury in the jury-room, is highly demoralizing. We have been accustomed to hear much complaining of "judge-made law;" which is at any rate "made" by persons who have large experience and special ability. But the very worst kind of law would be jury-made law; because it is

made only for each individual case as it arises, by incompetent persons, is liable to endless variation, and is always based upon perjury.

The danger of very serious innovations in criminal law, amounting to a repeal of statutes, and even to the suspension of the common law itself, by means of illegal verdicts founded upon false theories or private sentiment, is by no means imaginary. In England, for instance, infanticide by the mother of an illegitimate child, though still murder, punishable by death, has ceased to be a capital offence. *Juries* have repealed sundry statutes and set aside the common law. They have done this partly because of a natural horror of committing a woman to the gallows; partly from the feeling that there is always another criminal, a virtual accomplice, equally or even more guilty, whom the law cannot touch; partly from the feeling that the unhappy criminal was perhaps half maddened by the utter ruin which had come upon her, or by the physical exhaustion or excitement of parturition. Whether a change in the law relating to infanticide may or may not be desirable is wholly irrelevant; it is unquestionably undesirable that the change should be made, and undeniable that it has been made, by the perjury of juries.

On the other hand, the repeal of the general law relating to murder is unquestionably not desirable; but this, also, is undeniably in progress. It is being repealed by medical experts, employing for the purpose the perjury of juries. And this is the more mischievous because the medical profession neither has, nor pretends to have, *any* accurate and exhaustive definition of insanity to substitute for the legal one which "experts" have done so much to subvert. And there is no law without *accurate definition*. "Law," says Mr. James T. Stephen, "can only forbid or command acts capable of accurate definition and specific proof." (*Liberty, Equality and Fraternity*, pp. xli, 159.)

Now the definition of murder is an act of a certain kind committed by a sane man; and the definition of insanity*

* "A formed disease of the mind, existing before the criminal act is committed, which made the person accused incapable of knowing at the time he did the act that it was a wrong act for him to do." B. Alderson, in *Reg. v. Pate*, (1850.)

judges. But if *that* definition be unsettled, the definition of murder will be unsettled also. A plea, which is always conclusive when duly sustained by evidence, has become so unfixed in meaning; by modern theories, that nobody knows whether it can be proved or not. Nobody knows whether his most intimate acquaintance is or is not insane, until he is put on his trial for felony, or until his heirs-at-law dispute his will.

The late Commodore Vanderbilt was a man of consummate ability in the management of vast and complicated business transactions. It is probable that not a single human being believed him, during his lifetime, to be insane. His worst enemies would probably have accused him of excessive sanity, and a morbid wide-awake-ness. He dies, and leaves behind him a will, which, in the case of a millionaire, is, of course, contested. It is affirmed that he was insane; and it is attempted to prove this by horrible stories of the old man's wickedness—as that he used to swear fearful oaths, and keep mistresses; to express himself with offensive candor to a son whom he thought he had reason to detest and abhor; to consult spiritualists, and to receive the religious consolations of the Rev. Dr. Deems. Can absurdity go further? If old Commodore Vanderbilt was insane, who can consider himself safe from a lunatic asylum? And if such evidence—even if it were proved true—as that which for many a day defiled the New York newspapers, be conclusive of insanity in the case of a contested will, how much more conclusive should it have been for saving the old Commodore's life if he had been accused of murder! Of course, I by no means assume that the charges made against Mr. Vanderbilt are true; but they are illustrative of the absurd lengths of practical injustice to which the theory of moral insanity may be carried.

No doubt the evil would be remedied in a manner revolting indeed to Christian charity, but obvious and desirable on the ground of materialism, if our medical experts had the courage of their opinions—if they dared to treat insanity consistently and effectively after they had rescued it from the criminal law.

And this brings me to the second point which I propose to

consider—the effect of modern theories of moral insanity on civil liberty. If a man be mad enough to be acquitted of murder, though proved to be a homicide; if he be mad enough to be judged incapable of making a will; he is mad enough for anything—especially he is mad enough to be locked up. Moreover, prevention is better than cure. Lock a man up *before* he cuts his wife's throat; take care of his money for him *before* he squanders it on a mistress or a church, or wastes it in needless litigation by a doubtful will.

It is a very serious evil that the wills of wealthy persons are now almost always contested—especially on the ground of undue influence. Now, *no* influence exerted on a *sane* man, for the purpose of defeating a will, ought to be considered “undue” which does not include fraud. Sheer lies, which the testator could have no means of detecting, and on the strength of which he had diverted his wealth *from* those to whom he would otherwise have bequeathed it, and *to* him who invented the lies—might reasonably invalidate a will as they might have invalidated a contract *inter vivos*. But an appeal to justice; to religious obligations; to the importance of making some compensation to the world at large for a bad example and a mischievous life; to the necessity of providing for the relief of the soul in purgatory or elsewhere, by masses or otherwise; to the pious feeling which would be comforted by the foundation of religious houses, or the endowment of churches—all this is “undue influence” only if religion in general, or the Roman Catholic religion in particular, be itself a form of insanity. Suppose a clergyman, attending the death-bed of a rich miser, had grace given him to be honest, he would probably say something to this effect: “You have lived a life which in the sight of God and all good men is horrible and loathsome. By sordid penuriousness; by grinding the faces of the poor; by driving hard bargains wherever you could; by shutting your heart, your ears, your pocket, against every appeal to your humanity or mercy; by neglecting every obligation which your ever increasing wealth laid upon you, you have amassed an enormous fortune. You have never done any good with it, except when you could not secure your own interests without, at the same time, pro-

moting the interests of other people. Your life may be described as utterly devoid of all love to God and all love to your neighbor. So far as your life furnishes evidence, you have not a spark of religion in you; and if there be a hell, most assuredly its fires are kindled for exactly such people as you, and most assuredly you are going thither. Death has you by the throat. You cannot now fill your empty life with good deeds. You cannot heal the hearts you have broken, nor bring out of their graves those whom your cruelty abandoned or hastened to an early death. Do what you will now, you have lived a bad, Godless, brutal life, and you cannot mend it. You can cry to God for mercy; and, as you *must* leave your wealth behind you, you may show your penitence by leaving the most of it to the representatives of those very classes out of whose miseries and poverty your fortune has been constructed. Endow a hospital. Build a church, to remind men of the God whom you have always forgotten. Do something with your money better than enriching some greedy kinsman who has no claim upon your ill-gotten or ill-used wealth; and who will only repeat your own vices, or waste his inheritance in reckless dissipation. Nay; do not trust it even to the best of your survivors—make sure, before you die, that it will be so employed as at least in some degree to remedy your own wrong-doing."

If that sort of appeal be "undue influence," all religion is a mockery. There is not enough of such plain speaking. And if it be deferred till some old miser is *dying*, "better late than never." It is nearly always in vain. The old miser dies, and is buried, and *flowers*—good heavens! cover the coffin that hides his withered corpse; and if he leaves a hundred dollars to a "charity," somebody will eulogize his "munificence." Alas! *at the other side* all these lies and hypocrisies will be stripped off only too cleanly! But if the old sinner should really relent; if he should at last perceive what sort of life he had been living; if he should do all that now lies in his power to put his wealth to better uses—why, then, his "will" will be contested. Medical experts will testify that he was clearly under "undue influence;" so "morally insane" as to believe in a hell, and to think it worth his while to try and make his peace with God.

These "undue influences"—to which I may add, parenthetically, the world owes almost all its great foundations—colleges, universities, hospitals, schools, cathedrals, churches—are now always suspected. They have to vindicate their characters as if they were convicted thieves, "ticket-of-leave men." Philanthropy or religion, on any grand scale, are regarded as insane delusions, if they deprive of an un hoped-for legacy or inheritance some far-away cousin, whom the testator had never known or scarcely ever seen; and who had never thought of the testator, except as a dismal old foggy, whose death might possibly bring a stroke of luck that could never have been expected from his life.

But the right of making a will at all is being rapidly destroyed. A testator is now nearly always assumed to be under "undue influence" if he makes any other disposition of his estate than the law relating to intestates would have made for him. For instance, one son (or daughter) behaves with the basest insolence and ingratitude and insubordination. The father is very naturally exasperated. The son goes from bad to worse. Perhaps he is a drunkard; he gets into debt; he over and over again involves his father in his pecuniary liabilities. It becomes necessary to forbid him the father's house. There is another son—a younger son—dutiful, patient, helpful. It becomes often his dismal duty to stand between his father and his elder brother, and to shield the one from the insolence or violence of the other. At last he receives the final command—you shall, on no account, as you love me, allow your elder brother to see my face or enter my house. At last the father dies; worn out in mind and exhausted in body by the baseness of his eldest son, he leaves all he has to the younger brother. Of course the will is contested. "The old man's mind was giving way. The younger son would let nobody come near him. The elder son had been a little wild, indeed, but he was penitent, and so forth. If he had been allowed to see his father's face all had been well." The will is upset. Old gentleman under "undue influence," which is a mild form of moral insanity.

But the destruction of the right to make a will is a mere trifle compared with the insecurity of personal liberty which

would follow any *consistent* application to practice of modern theories of moral insanity. Everybody admits that a criminal or dangerous lunatic ought to be confined. But who knows who is a criminal or dangerous lunatic?

"Another fact of observation," says Dr. Maudsley (*Responsibility in Mental Disease*, pp. 41-43), "is, that the offspring of persons who have suffered from some nervous disease, frequently inherit a liability to the attack of some other nervous disease than that which has given them their neurotic heritage: there is a kinship between nervous diseases, by virtue of which it comes to pass that they undergo transformation through generations. The two diseases most closely related in this way are insanity and epilepsy—the descendant of an epileptic parent being almost, if not quite, as likely to become insane as to become epileptic, and one or other of the descendants of an insane parent not unfrequently suffering from epilepsy. In like manner, neuralgia in the parent may manifest itself in the offspring in the form of a tendency to insanity; and every experienced physician knows that if he meets in practice with a case of violent neuralgia, which occurs from time to time in an obscure way, without any discoverable morbid cause, he may predicate the existence of insanity in the family with almost as great confidence as if the patient were actually insane. How it is, we know not; but so it is, that a certain form of neuralgia owes its origin mainly to a neurotic inheritance. * * * * Insanity might truly be described as a chorea or convulsive disease of the mind, the derangement being in nerve centres whose functions are not motor, but mental; and whose derangements, therefore, display themselves in convulsions—not of the muscles—but of the mind. Hence it is that instances occasionally present themselves in which the disorder is transferred suddenly from one set of nerve centres to another—the old symptoms supervening. Thus, a severe neuralgia disappears, and the patient is attacked with some form of madness—the morbid conditions of perverted functions having been transferred from the sensory centres to the mind centres. When the madness has passed away, the neuralgia may return. Again, convulsions cease, and insanity occurs, the transference being from the motor centres to the mind centres; or conversely, the appearance of convulsions may be the determination of an attack of insanity."

Can anything be more alarming than this friendly feeling which seems to prevail among the different kinds of insanity?

this cheerful way they have of playing hide and seek, disguised in one another's clothes, in human brains? You pick up an epileptic, who has fallen down in a fit; he instantly confronts you as a homicidal maniac and plunges a knife into your heart. Your daughter goes to bed with neuralgia. She wakes up in the middle of the night perfectly cured, and cuts her sister's throat. The dreadful question presents itself—not how many of us must be shut up, but how many will be left to take care of us? And when to epilepsy, and chorea, and neuralgia, we add eccentricity, perverted affections, a morbid desire for what belongs to other people, an inexplicable longing for intoxicating drinks, and all the other innumerable symptoms or kinds of "moral insanity," it becomes all too plain that the whole world is an asylum, and that we are all lunatics together.

Of course, it might fairly be urged, that this a mere caricature of the various theories of mental disease; and, indeed, it would be a caricature of them *as mere theories*. But it is no caricature at all of these theories, when they are applied as practical directions in the departments of law and ethics. The *legal* definition of insanity is perfectly precise. It has sufficed for all purposes of ordinary justice through many generations. The *medical* definition of insanity, on the other hand, is even yet entirely unfixed. "It would certainly," says Dr. Maudsley, in the charming little book that I have already quoted, "be vastly convenient, and save a world of trouble, if it were possible to draw a hard and fast line, and to declare that all persons who were on one side of it must be sane, and all persons who were on the other side of it must be insane. But a very little consideration will show how vain it is to attempt to make such a division. That nature makes no leaps, is nowhere more true than in respect of sanity and insanity."

But nothing can be more plain than this, that criminal law consists of hard and fast lines. Whatever may be the case with physicians, or even with nature, *that law must* make sudden leaps. The legal definition of insanity may not, indeed, include all insane persons; but it will certainly include all those persons whose insanity the law will undertake to

recognize. On the other hand, it will include nobody whom any physician would pronounce sane. The attempt to substitute, for legal accuracy, the utter vagueness of medical theory, has done much already to demoralize law, and very seriously endangers civil liberty. For, indeed, the practical conclusions at which physicians have already arrived, are such as these: epilepsy, chorea, neuralgia, that particular kind of drunkenness which is called dipsomania, are all liable to become changed into the most dangerous kinds of madness—for instance, into suicidal or homicidal mania. Homicidal mania is never *certainly* cured. It is not safe to allow any insane person to be at liberty. No insane person—including epileptics and dipsomaniacs, and such like—can *marry* without the certainty of propagating insanity. What then? Will physicians dare to insist upon the only means that human ingenuity can devise of stamping out this fearful curse? Everybody knows that they will not. They will not even forbid marriage to their own patients, though they know them to be insane; and they satisfy their own consciences by the fact, that marriage, though it never obliterates the hereditary taint, does sometimes temporarily cure an attack of insanity. It may, indeed, be doubted, whether Christian tenderness, in dealing with this unspeakable misfortune, has not done more harm than good. It is perfectly certain that consistent materialism would demand the immediate destruction of every insane person. But the course pursued by the medical experts of our own day, in accordance with modern theories of moral insanity, is perhaps the very worst that could be devised. They prove with a conclusiveness, which might well strike with panic a whole nation, the almost universal prevalence, in one form or another, of this terrific curse; and, at the same time, they have almost destroyed the protection which the law afforded us against lunatics; while, by greatly enlarging the definition of insanity, they have seriously endangered very important rights.

And now I come to the third part of this subject, which I propose to discuss, viz.: the effect of current theories of moral insanity upon social morality.

We have already encountered some of these. Everything which relaxes the bonds of law enfeebles morality. Every kind of untruth is debasing; but untrue *verdicts*, in the course of any legal process, are a peculiarly mischievous kind of untruth—not only because they produce practical injustice, but because they are without excuse. The precise issue is strictly defined. Moreover, in trials for felony, or in the case of disputed wills, the habit of hunting out a kind of *ex post facto* evidence of insanity involves lying, thick and thin, and all around. It involves, also, the total inversion of all moral judgments.

Take, for instance, drunkenness. It would be too indiscreet to deal with modern theories of those vices of which erotomania and nymphomania are the analogous diseases, though there is very much on that subject which needs saying, and which, indeed, ought to be said. Both physicians and clergy are only too well aware of the prevalent laxity of social morality in this direction; and when they talk together confidentially on such matters, they give expression to opinions which the world would be much the better for knowing. But, alas! history continually repeats itself. Cancerous vices are allowed to eat out the life of society, because, forsooth, we are all too refined and modest to endure the indecency of any mention of the sins which we are not at all too modest and refined to commit. The news columns of the newspapers team with loathsome details of "scandal and fiendish outrage," and the like; but a good, honest leader, dealing with the vices of which these abominations are the mere symptoms, we never see. But take drunkenness. This is a vice which prevails to a most alarming extent through all classes of society; and it has now been taken under the protection of the medical profession under the euphonious name of dipsomania—not that even an "expert" would regard all drunkenness as a mania; but the public are not experts, and they are only too glad to welcome an elastic theory which relieves them of all painful sense of responsibility, and enables them to condone—at least after death—the profligacy and dissipation of their kindred and acquaintances. Moreover, if dipsomania be a genuine disease, a real form of

insanity, we must not forget that it will possess the hereditariness and the tendency to metastasis—*i. e.*, to become transformed into some other form of mental disease—which is, perhaps, the most horrible characteristic of lunacy. In fact, *every* lunatic is a dangerous lunatic, and *every* kind of madness is liable to become homicidal or—which is a kind of silver lining to the cloud—suicidal.

The hereditariness of drunkenness—or rather of that perversion of morals which leads to habitual intemperance in the use of alcoholic stimulants—has probably been grossly exaggerated. It is sometimes asserted in a form for which, not only is no evidence whatever produced, but which seems, from the nature of the case, incapable of proof—except by a series of actual experiments which are morally impossible.* But the transmission of habits of intemperance from parents to children, may be accounted for in so many other ways than by physical inheritance that the proof of that particular case of heredity is exceedingly difficult. Indeed, it requires a very rigid application of the “method of difference.” If a number of the children of drunkards, sufficiently large to eliminate mere chances of accidental coincidence, *be removed from their parents at their birth*, and brought up in healthy and well-ordered families, with no knowledge of their ancestry, and with none of the depressing influence of knowing that they are merely adopted children—if, in a word, they can be so placed that their condition will differ from that of those among whom they live *only in the single fact of their being the children of drunkards*, we shall be on our way towards a proof of hereditary dipsomania. No proof of this kind has yet been offered. The hereditary transmission of disease, and especially of those very obscure diseases which affect the mind, is, of course, beyond dispute, and easily demonstrable. Idiocy, congenital deafness, or epilepsy, or phthisis, *can* be accounted for by inheritance, and are, at least, free from any moral complications. Nobody can acquire phthisis or epilepsy by following a bad example. But the case of so-called

*See Bucknill & Tuke's *Psychological Medicine*, pp. 57–58, last and first two paragraphs; 3d London Edition.

“We should expect this *a priori*, and experience appears to prove it” is scarcely the language of science.

hereditary drunkenness is altogether different. Here the moral influences are so numerous, so strong, so subtle, and so unceasing, that nothing more is needed to account for "hereditary" intemperance. Other causes may or may not exist, but they may safely, in the enormous majority of instances, be left out of consideration.

A very few persons may drink stimulants only because they like the taste of beer, or wine, or brandy; the enormous majority of drinkers, whether temperate or intemperate, drink them because they stimulate. Again, a few persons drink them until and because they become narcotics—"to drown care." But the prevalence of drunkenness depends, in the main, on social morality in any given stratum of society. There was a time, and not so long ago, when drunkenness was not considered discreditable among "literary men," of which, so well known a book as Moore's *Life of Lord Byron* contains abundant evidence, if any were needed, comparatively recent. We all know that this was the case also among the last generation of "country gentlemen." Even great statesmen have been almost as notorious for their intemperance as they were famous for their political ability. And these instances, by the way, are lamentable—but conclusive—evidence that a very large amount of alcoholic stimulant, taken habitually and to obvious excess, is not incompatible with conspicuous mental power and more than ordinary longevity. The three-bottle men of the days of our grandfathers did not die young. But when drinking three bottles, and being taken to bed unconscious was the fashion, do we need a mysterious theory of hereditary transmission of "dipsomania" to account for hereditary intemperance? Intemperance is not now the fashion; but outside the ranks of the more violent teetotalers, toleration of intemperance is.

But take the case of an ordinary family with a drunken father. What will the *moral* effect of his drunkenness be? It will operate in two opposite directions with about equal force. Some of his children he will horrify and disgust. They may very likely become teetotalers. But the others will soon become accustomed to "poor father's infirmity." They will, of course, do all they can to shield him from an-

noyance and the censures of society. They will flatter themselves that with him "it is really almost a disease"—"he can't help it." If he be a man of kindly nature, as drunkards very often are, he will be even more beloved on account of his vice; because there will be a determination of affection to meet the necessities of his case, a sort of hypertrophy of filial love. Possibly, also, the father's intemperance may be the consequence, in part, of a too heedless sociability. Company at dinner, friends dropping in in the evening, genial manners at the club, and such like, may be the occasion, if not the cause, of his wicked folly. But all these influences will operate also on his children; and the probabilities are, that one-third of them will be teetotalers and two-thirds drunkards.

Of course, nobody pretends that all drunkenness is dipsomania. But in examining the medical definitions, or rather descriptions of dipsomania proper—if there be such a disease—a very significant difference is observable between the accounts of ordinary practitioners, and those of physicians who are almost entirely devoted to the treatment of the insane. The general practitioner has his theories constantly tested by the actual usages of society. He sees immediately their practical effects; and he distinguishes between those facts of which a physician is the only competent judge, and those other facts which lie open to the observation of all mankind. Here, for instance, is the account of dipsomania in an ordinary text book of medical practice. (Tanner's *Practice of Medicine* pp. 324, *et seq.*; sixth American Edition, 1874).

"Within the last few years, the word dipsomania has been revived, to express that craving for intoxicating liquors which, according to some physicians, partakes of the character of insanity. Now, although a fit of intoxication is undoubtedly an attack of temporary mania, yet it appears a highly unphilosophical view (and motor, which is fraught with the greatest danger to society) to regard a dipsomaniac as an irresponsible being; to look upon him, in fact, as an individual affected by some recognized form of lunacy.

"Hard drinking is a degrading vice, and, like many other vices, the more freely it is indulged in, the more difficult be-

comes its discontinuance. It is a cause of insanity, and a cause of crime, though I believe its influence in these respects has been much overrated. The drunkard is artful, and especially untruthful; he breaks every promise he makes, and he is perfectly regardless of the feelings and happiness of others. His good resolutions are few, and written in sand; his temptations and failings appear innumerable and insurmountable. Nevertheless, it is absurd to say that the desire for alcoholic stimulants is a disease—that it is symptomatic of some abnormal cerebral condition, unless, indeed, we allow the same of every act of wickedness and folly. Not only is the experience of the dead-house against such a view, but if this evidence be set aside as of little value, we yet know that there is no difficulty in curing the most inveterate sot, provided we are but able to deprive him of his poison. The fact is indisputable, that many who drink to excess can be persuaded to abstain temporarily, if only a limit to their abstinence be fixed, so that they may enjoy the anticipation of a debauch; while a few can be so influenced that they renounce this habit entirely.”

Now, compare with this the definition and symptoms of dipsomania in Bucknill & Tuke's *Psychological Medicine*.

“An uncontrollable and intermittent impulse to take alcoholic stimulants, or any other agents (*e. g.*, opium and haschisch) which causes intoxication. * * * *” “How shall we distinguish the two conditions”—intemperance without disease, and “a truly diseased cerebral condition, the result of which is inebriety”—“when the result—intemperance—is the same in both? First (as in all cases of alleged insanity), by observing whether there are any symptoms present which can be referred to primary disorder of the nervous system—that is to say, other symptoms than those which, as in ordinary drunkenness, can readily be accounted for by the prolonged indulgence in alcohol. The family psychological history, again, is of great importance. Cases in which an insane parent has a drunken son point strongly, of course, to disease. The development of the appetite for stimulants in early life, is another indication in the same direction. But, to come more closely to the circumstances attending the habit itself, the prominent feature of this propensity is its *irresistibility*; the thirst for drink is the tyrant which overbears all the higher emotions, and blindly leads the oinomaniac to a course against which his reason and his conscience alike rebel.

"The dipsomaniac's paroxysms are preceded by a general perturbation of the system. He perspires; the pulse is soft, but quiet. He is sleepless, uneasy, prostrate, and so craves a stimulant. Between his attacks he differs from the mere sot in often positively disliking beer or spirits, and is a useful member of society.

The grand characteristic, then, of the disease under which the oinomaniac labors, is the irresistible impulse by which he is impelled to gratify his propensity; being, during the paroxysm, 'regardless of his health, his life, and all that can make life dear to him,' and the proof that it is really a disease must be based on the symptoms already enumerated." (Pp. 293-295.)

Surely everybody must observe, not only the extreme vagueness of these descriptions, but also, and chiefly, that they are by no means strictly medical. No doubt, it is the business of the physician to detect a "truly diseased cerebral condition;" and if he really could discover it by actual examination of the brain, of the pulse, of the temperature, or by any other of the physical modes by which he arrives at a diagnosis of ordinary diseases, there would be an end of the matter. But when he tells us that the prominent, and, indeed, only trustworthy symptom of dipsomania is the *irresistibility* of a propensity to drink, it is quite clear that we are here entirely outside of medical diagnosis. If you could first prove the existence of cerebral disease, you might argue with more or less probability, that an irresistible propensity to drink would be one of its effects; but, if your only evidence of the cerebral disease is the irresistible tendency to drink, that tendency must be proved by the ordinary kinds of evidence. So, again, the premonitory symptoms of the paroxysms of dipsomania, if they prove anything at all, prove that the craving for stimulants is not a form of insanity. The patient "perspires, the pulse is soft but quiet, he is sleepless, uneasy, prostrate, and so craves a stimulant." This little word, *so*, entirely demolishes the argument upon which the existence of a definite disease, dipsomania, rests. We are told that the patient between his attacks often dislikes beer or spirits. How, then, does it come to pass that he has a craving for them? Clearly, because he *needs* stim-

ulants; he is "sleepless, uneasy, prostrate." If he were under medical treatment, his physician would most likely prescribe those remedies which are best adapted to restore the tone of an enfeebled constitution. Very possibly alcohol might be among them. But the man is not under medical treatment; he just doctors himself. He knows perfectly well, from experience, that beer, wine, whiskey or brandy will relieve his weakness and depression, and he does not know where he ought to stop. His propensity to drink is irresistible, if it be irresistible at all, not because he is mad, but because he is "run down."

It is exceedingly doubtful, whether any such disease as dipsomania really exists; and assuredly the evidence which has thus far been offered to the public in medical books, is very far from satisfactory.

Nevertheless, the mere fact that habitual drunkenness is beginning to be regarded as a disease, is very seriously demoralizing society. Even if, in very rare cases, it may be the result of some cerebral lesion, these cases are so few that they are not really worth considering in ordinary practice. The proper way to treat habitual drunkenness, is to regard and to punish it as a detestable vice; to punish it *as drunkenness* by the severest social censures; in other words, by putting habitual drunkards entirely out of "society." And, again, to punish it indirectly, by attaching a severer penalty to all crimes of which drunkenness can be proved to be the occasion.

But here I must conclude; the public, and even public morals, are under so many obligations to the medical profession, that it may seem a thankless and ungrateful task to call attention to those serious dangers which have actually arisen from recent theories of moral insanity, hereditary disease, and irresponsibility for crime. The true remedy for those terrific evils which affect society, is assuredly, not the lunatic asylum, but a more stringent morality, a more sincere religion, and, on the merely physical side, a more natural way of living.

No. 363 N. Charles street.

ART. IV.—**Neurotomy instead of Enucleation—A New Operation in Ophthalmic Surgery.** (A Clinical Lecture Delivered before the Medical Class, at the University of Maryland Hospital). By JULIAN J. CHISOLM, M. D., Professor of Eye and Ear Diseases, in the University, etc., Baltimore.

The case which is now before you for operation is that of a woman fifty years of age, who has been suffering severely with her right eye for the past four months. Twenty-seven years since, she injured this eye so seriously as to lose all use of it. When the inflammatory attack, induced by the accident had passed, all pain disappeared from the eye, and in the course of time it ceased to give her any anxiety. In this painless condition, twenty-seven years have elapsed; when four months since, from no known cause, it became very painful. The lost eye has kept her in such constant trouble from that time, that she desires to get rid of it, so as to be freed from pain. Upon examining the eye you see her shrink from the slightest touch. The conjunctiva is injected and the iris discolored, with a little blood in the anterior chamber; but the cornea is clear, and the eye full. She has no perception of light in this eye. Recently, the left eye has become fretful upon use, and strong light annoys, which points to irritation through sympathy—a warning that should never be overlooked, as blindness in the good eye will be the consequence. The lost eye looks too good to enucleate, which should be the proper course to pursue, and yet is too painful and useless to be retained.

It is just for this class of cases that the new operation of cutting all the nerves entering the eye at the back of the eyeball has been suggested, so that the lost visual organ may be retained in the head for appearances, while it is deprived of all power of doing harm to the other.

A law laid down in eye surgery, which should have fewer exceptions than are found, is, *that an eye lost from accident, and which continues to be painful, is a dangerous organ.* On account of the nervous sympathies which tie the two eyes together, such a lost and painful eye cannot be retained, except at the risk of injuring, sooner or later, the good one. When sympathetic inflammation is once set up in the heretofore good eye, no course of medication, nor of surgical proce-

dures can stop it in its onward progress to the painful destruction of the visual organ. Blindness for the remainder of life must be the portion of the unfortunate individual, and we recognize no greater bodily affliction.

The general practitioner does not lay sufficient stress upon the dangers incident to carrying a lost eye; hence, the number of blind persons who might, at least, have retained one good eye, if this law in eye pathology had been better known. These observers come across men who have lost one eye in the pursuit of their occupation, still busily engaged in the daily task of making a support for their families, and continuing in the same, month after month, until a life-time slips by. No special annoyance seems to have been caused by the lost eye, the presence of which they have often forgotten. If such an experience had no exception, there would be no ground for anxiety for the remaining eye, when an individual has, by accident, lost one of them.

Even the dread of over-work could do it no harm. The widely accepted belief that one eye does double duty when used alone, is altogether without foundation. An eye does its whole work whenever used, and can do no more under any other condition. The two eyes, when used conjointly, give us a greater range for lateral vision, and enable us to appreciate distance, solidity and perspective. What is still more important, the two eyes give us a double chance for seeing, in case of accident to one. But when it comes to sharp sight, one perfect eye can do, and does do, all that two are able to accomplish—no more, no less. There is, therefore, no strain when one eye has been removed, even should the one-eyed person read, write or sew all day long.

When an eye has been lost, especially from a penetrating wound which has cut into the eye-ball, then danger threatens. The lost eye resembles a keg of dynamite—safe enough if nothing disturbs it, but fraught with terrible consequences from slight provocation.

Sometimes it happens in the experience of a physician that one of his patients gets a cut or thrust in the eye from a piece of broken glass or stick, or receives a puncture from an article of every-day use, as a pair of scissors or a fork. Inflam-

mation is excited by the injury. After weeks of suffering, the eye quiets down, and although no useful sight comes back in the injured eye, it gives no special annoyance. Weeks, months, years may elapse without trouble or interference with daily labor. Suddenly, from no known cause, the useless organ becomes painfully inflamed—the eye becoming red and sensitive to pressure. The physician, when consulted, satisfies all parties with the familiar expression of a “cold has fallen in the eye,” and prescribes the usual astringent remedies. Often the case exhibits a rebellious disposition, but the obstinate attack yields to treatment, and the pain, watering and redness subside. An interval of repose, more or less long, is now enjoyed; then a second inflammatory attack ensues, with its accompanying pain in and around the lost eye. On account of this, it is irksome for the patient to read or do any near work; for the good eye is weak from sympathy, and strong light annoys. Seclusion in a dark room, with the continued use of remedies, again restores quiet, and enables work to be resumed after a few weeks of confinement.

Another interval of irregular duration, and then another attack occurs, and now the good eye may also become inflamed, painful and watering. Sight is somewhat blurred in it, and pressure upon the heretofore sound organ sends a sharp twinge of pain through it. A “very severe cold,” says the family physician, and prescriptions for catarrhal ophthalmia are again given. An improvement from the injected and painful condition is long and anxiously looked for; and, when it finally comes, sight continues very defective in the good eye. A careful examination of the recently involved eye would show a discolored iris and a small pupil, which has lost its peculiar and appropriate blackness. If a solution of atropia be applied to this eye, the pupil either does not yield or it dilates with a very irregular outline, showing that adhesions of the pupillary opening to the contiguous lens prevent expansion. The anterior chamber will also be found shallow, and the iris appears to bulge forward as if pressed from behind. From this appearance, the surgeon recognizes a condition called sympathetic iritis. *It has been induced by the irritated nerves within the opposite and lost eye.*

Such an inflammation, when once excited, is prone to extend to the entire uveal tract, involving the ciliary region, and also the choroid membrane. *It means, always, destructive work.*

These cases occur so seldom in the experience of any one general practitioner, that he does not trace the trouble in the second eye as a logical consequence of injury to the first. He often discourses upon the frightful affliction of his patient, who, from a simple cold in the eye should lose the valuable organ, made doubly precious, since the loss by accident of the other. That "troubles never come alone," he also quotes, not seeing how he has himself innocently played a conspicuous part in the tragedy.

The specialist in eye surgery, who collects these individual cases from many physicians, and supplements them by the many who seek aid primarily at his hands, has often to notice the intimate relations which exist between the accident to the one, and the subsequent irritation of the other. He has also become aware of the fruitlessness of all medication, when applied to the saving of the good eye. When the iris and ciliary region is sympathetically involved in acute inflammation, blindness is sure to follow, regardless of the most active interposition of the surgeon.

Persons have been brought to me, with head enveloped in many cloths for the total exclusion of every ray of light, so irritable had the good eye become from a recent accident to the other. So impossible was it to admit light enough for examining the eye, that an anæsthetic was needed to permit an investigation as to the extent of the injury. Under its quieting influence, the injured eye was found completely torn across, and so full of blood as to be utterly destroyed, and from which not even light can be detected. I removed the injured organ, and in twenty-four hours—what a transformation! A child, struck in the eye with a sharp piece of metal, who, for days, has had his head buried in pillows, crying out in agony, should the door of the darkened room be left ajar—is seen at the open window the day after the enucleation, with every trace of the distressing sympathetic irritation gone from the good eye. *The extirpation of the destroyed eye has been the active means of cure, and is the only one.*

Although the sympathetic attack has no fixed time for coming, this is no reason why it will not put in an appearance when least expected. I have seen an intense irritation excited by an eye that had only been injured a few days; and again I have seen thirty-five years elapse before a shrunken ball would take on inflammation and excite serious trouble in the good eye. For this very long interval, the patient has carried a useless, deformed organ, and the sequel has proved it a dangerous one.

Ophthalmic surgeons who have studied most carefully this subject, agree that, although a person may carry through a long life a lost eye which some penetrating wound has destroyed, he is at any time liable to have attacks of destructive inflammation in the good eye, induced by nervous sympathies which nature establishes between these twin organs; and that safety alone resides in breaking up these sympathies by the removal of the lost eye. By this operation, the good one remaining is made permanently safe, as if no accident had occurred.

We therefore lay down the rule, and recommend as the only safe course, the enucleation of lost eyes, knowing that, in this particular instance, the ounce of prevention is worth more than all other so-called curative remedies.

While every one shrinks in horror from the contemplation of blindness, and is ready to accept any alternative to escape from so frightful a doom, the extirpation of an eye is not to them a pleasant contemplation—notwithstanding the assurance that it is a safe operation, and, under some anæsthetic, altogether free from pain, and one calling for only a few hours' confinement. Unfortunately, there are too many who cannot be made to believe that so serious an injury to one eye can cause extension of danger beyond its own side of the face. Such persons resist, until too late, the good advice given to have the lost eye enucleated. This is more especially the case when the lost and painful eye retains, to all appearances, its good looks. A marred and white stump is given up much more readily.

It does not always need an extensive disfiguring wound to destroy eye-sight, and make the lost organ a dangerous one

A wound of small extent, provided it perforates the eye-ball at the ciliary region, where the colored and white parts join, will destroy sight amidst much suffering, and yet not leave any very perceptible deformity to the casual observer. In such cases, the owner of the good-looking eye battles against mutilation, and is backed up in his false position by hosts of relatives and friends, as if they could or would share his blindness when trouble comes. Were it not that the ophthalmic surgeon foresees the great risk for the other eye, he would do, what the general practitioner so constantly does, and side with the friends. By yielding to the wishes of the patient, he would, however, expose him to great danger. The injured man has no objection that you do what you think proper to relieve him of pain and danger, provided you do not remove the eye-ball. It is to meet these very cases that the new operation has been suggested.

It was in a case of this nature that I first put into practice the conciliatory course of protecting my patient, and at the same time save him a good-looking but useless eye-ball, which he did not wish to give up, although it had caused him so many sleepless nights of intense suffering. The course pursued was to cut all the nerves entering into the injured eye from the ophthalmic ganglion, and thereby end abruptly all sympathetic connection between the offending organ and the rest of the body. This leaves the living eye in place, acting, as far as movements go, with the other, keeping up its relations with the lids and lachrymal apparatus, but deprived of all internal nervous connection likely to cause future annoyance.

Those who dissect eyes in their natural position, find that most of the nerves which enter the eye-ball perforate the sclerotic coat in the immediate neighborhood of the optic nerve entrance. A very small area at the very back of the eye ball will cover this entering region. The nerves which perforate this space are, first, the optic nerve for special sensation, and then the many offshoots from the ophthalmic ganglion, carrying with them motor, sensitive and sympathetic influences. When these numerous threads have entered the ball, they meander forward between the choroid and sclerotic

coverings to reach the ciliary region and iris, to which they are so very freely distributed. If destructive inflammation arises within the eye, these are the peripheral nerves within the eye-ball which cause the agony and excite outside sympathies. It is from this small posterior area that the eye-ball receives its chief nerve supply. Arteries and veins have entrance and exit through the same region, but not so exclusively as the nerves. Many vessels perforate the sclerotic in the front of the eye-ball, and, passing inwards, give, also, nourishment to the eye contents. The muscles which move the eye-ball hug the walls of the socket, in their course to the apex of the orbit, where they seek a bony support. In their backward course, they enclose quite a large conical space, filled with fatty tissue, in which these nerves and vessels entering the back of the eye are imbedded.

It is easy to sever all of these nerves and vessels without injury to the muscles which move the eye-ball. In this way, nerve-connections can be effectually and permanently cut off from the interior of the offending organ. The blood-vessels which feed from the front are quite numerous enough to keep the eye well nourished—the uninjured muscles preserving to the ball all the natural motions, and the surface nerves still giving it all the protection needful from the presence of foreign bodies on the conjunctiva. By this neurotomy of the ciliary nerves, the patient is to gain protection, escape from pain, and yet receive no mutilation. Although recognizing the uselessness of an organ in which there can be no sight, he still values the retained eye beyond all price.

The first case upon whom I operated was a bright lad, 14 years of age, who was brought to me by his family physician to have an injured eye removed. The sclerotic had been cut open in a clean wound, running from before backwards, and, with a free escape of vitreous humor, the eye-shell had collapsed. Hæmorrhage within the chamber refilled it, and the lips of the scleral wound having come in contact, healed up most kindly. Two weeks had passed, and the physician was congratulating himself upon the unusual good result obtained, when the eye became painful, with some injection. Atropia solutions were tried in vain to ease the suffering. The patient then came under my care. I found a clear cor-

nea, with a pupil distended to the full capacity of the corneal border. No fundus reflex could be obtained by ophthalmoscopic examination, and the patient could not detect light with the injured eye. For two weeks he had been crying, night and day, from constant pain, and had sought the seclusion of a dark chamber to escape some of the suffering. A scar on the temporal side of the eye-ball indicated the location of the sclerotic wound. It stopped short of the ciliary border of the cornea, and lost itself in its backward course under the fold of conjunctiva. As the eye was good-looking, and the child had a long life before him, with much annoyance and expense from the prospective wearing of an artificial eye, I determined to test for him the efficacy of a neurotomy.

Chloroform having been administered, a vertical incision was made over the tendon of the internal rectus muscle, one line from the margin of the cornea, and the exposed tendon was carefully dissected from its sclerotic attachment. This made quite an opening at the inner canthus, through which the back of the eye-ball could be reached. A little shelf of tendon left on the sclerotic was now seized, and by its means the eye-ball was rotated forcibly outwards. This rotation brought the optic nerve area nearer to the nose, and the posterior portion of the eye within easy reach of a heavily curved scissors, introduced into this opening made between the eye-ball and the internal rectus muscle. Between the open blades of the scissors, the nerves and vessels were caught, and all were divided by one single stroke. The scissors were then drawn partially out, the blades opened, pushed forward, and again closed, so as to divide any structures which might at first have escaped. Precautions were taken not to allow the blades to reach across the conical cavity and disturb the bellies of the eye muscles on the opposite side of the socket. The scissors were now withdrawn from the opening; a gush of blood escaped—an evidence that the retinal and ciliary vessels had also been severed, along with the optic and ciliary nerves. A suture, with a needle at each end, was thrust through the inner rectus muscle—the needles being made to perforate deeply from within the recently-made orifice, and coming out near the caruncula. Then, by passing the needles anteriorly through the wound and under the conjunctiva, the point of one was made to protrude over the site of the superior rectus, and the other through the mucous membrane over the inferior rectus. Upon tying the noose, the muscle was drawn forward into its natural posi-

tion; and its raw edge came in contact with the scleral surface, from which it had been dissected. When the muscle had been secured in its place, the eye-ball bulged considerably forward, on account of a quantity of blood accumulating behind it, and now exhibited a very decided prominence, but the sutures, so deeply placed, held it firmly in position, and prevented any appearance of squint. A compress bandage was applied over the eye, and cold water dressings were ordered.

A good deal of nausea and vomiting ensued from the chloroform. This increased the bulging of the eye from post-ocular bleeding, but did no damage. After some hours, when all the anæsthesia had passed off, the patient found himself free of pain. He slept well the first night after the operation, and had an uninterrupted convalescence. The presence of the suture excited much injection of the conjunctiva, with some muco-purulent discharge; and the extravasated blood, after some days, found its way into the lids, giving them a much bruised appearance. In three weeks this had all disappeared. The replacement of the muscle had been so satisfactory, that the movements of the eye-ball were perfectly natural, and, to all appearances, no operation had been performed upon the eye. From the moment of operation, all pain ceased in the eye. Five months have now elapsed since the operation, and the patient has not had the slightest discomfort. Upon examination, an external squint of one degree is present—just enough to show that the eyes are not perfectly parallel. An ophthalmoscopic examination now shows the chambers perfectly clear. The pupil is still dilated. The lens was luxated by the blow. Its suspensory ligament was torn from the outer side of the eye, which allows the outer edge of the lens to divide the pupillary area. It retains its transparency. In the fundus, near the optic nerve entrance, is the evidence of a large rent in the choroid, the edges of which have become pigmented. The optic disc is grayish—the vessels upon its surface having shrunk to the finest pink lines. No other change could be observed in the interior, except some palor in color of the choroid. The tension of the eye was normal. The cornea retained its sensitiveness, and the general nourishment of the eye-ball seemed perfect.

The second case was that of a woman, aged 25, who had lost an eye from choroido-iritis. The pupil was closed, and the cornea hazy; all light had disappeared from the organ, and the slightest touch indicated active cyclitis, and caused sharp pain. For four weeks her suffering had been intense,

so that she was quite willing to give up the eye, to escape further torture. A similar operation was performed upon her with like results. The severity of the pain at once ceased, and only the soreness of the traumatic conjunctivitis remained the day after the neurotomy.

The third case was similar to the second. A man, 35 years of age, had lost his right eye from iritic inflammation, which had extended backwards to the ciliary region and choroid. He had lost sight for over a year, and for the last three months his life had been one of torment, from the continued pain in the lost eye. The good eye had become very weak, and was the seat of sympathetic irritation. Neurotomy of the optic and ciliary nerves was determined upon in his case, and performed in the manner already described. He also secured prompt relief, and has had no return of pain from the time of operation. The blood extravasation in his lids was excessive, but in good time was absorbed.

The fourth case was one of great interest. A gentleman, aged 25, occupied in the construction of iron bridges, was struck in the right eye by the end of a broken bolt, driven from a steam punch. The piece of iron resembled, in size and appearance, a Minie ball. Why it did not crush up the eye and break into the skull, cannot be explained. I saw him a few hours after the accident. The face had been tied up with cloths, which were saturated with blood. I found the upper lid slightly cut, but not enough to explain the free flow of blood from beneath its under surface. I had great difficulty in checking this hæmorrhage, and finally had to use compresses and careful bandaging, without being able, at the time, to discover the wound from which the blood so freely flowed.

By the next day I was able to examine the eye. I found the anterior surface normal. A cut was seen in the upper part of the sclerotic, three lines distant from the corneal border, from which the free hæmorrhage had taken place. There was only perception of light in the eye. There was a little blood in the anterior chamber, and the vitreous was so turbid that no fundus definition or reflex could be obtained by ophthalmoscopic examination. By the use of atropia drops and cold water dressings, all redness passed away, and in one week the patient returned to his supervising work; sight was not regained. For one month, the eye gave him no trouble, when, from no exposure that he was aware of, the eye became injected and painful. He applied at once for treatment. I used the artificial leech, gave opium

freely, and applied atropia and iced cloths. These failed to give him more than temporary relief. During the day he would feel tolerably comfortable, but would pass nights of agony. After three weeks of suffering, he came to the conclusion that the pain was more than he could endure, and that he must get relief, even if the eye-ball had to be taken out. Sympathetic irritation had, by this time, made its appearance in the good eye, which prevented any use of it, or even exposure to light. In this case, the cornea was clear, and the iris of good color. The pupil was black, the lens not having been injured. The ciliary region was of a deep pink injection, and could not bear the slightest touching.

Under chloroform, I practised tenotomy upon him, making the usual opening at the inner canthus by separating the inner rectus muscle from its line of adhesion to the eye-ball. In this case, hæmorrhage was free upon making section of the posterior tissues, and the after exophthalmic condition was very decided. The day after the operation, I found him singing joyously. He had had such a splendid sleep, and was now absolutely free from all pain. For five days, he was kept in doors, and, before the end of the week, he was actively at work supervising the construction of a long iron bridge. The sutures were removed on the sixth day, and he has had an uninterrupted convalescence. The eye to-day looks as well as it did two weeks after the accident, when he thought it quite recovered, barring the absence of sight. It possesses all the motions of the other eye, without exhibiting the slightest trace of squint. He is delighted with the superb results, and so am I.

The fifth case was that of a police officer who, in arresting a disorderly person, was stabbed with a knife. The blade perforated the upper lid of the left eye, and, entering the ball, passed through the ciliary region and transfixed the lens. When he came under my observation, seven months after the accident, I found the left eye lost to even the perception of light. The eye was cataractous, with cornea and iris still good, and the eye-ball very desirable to be retained. He was extremely anxious for the good eye, and came to me from a distance to have the lost eye removed. The case seemed in every way a proper one for neurotomy. Under chloroform, the ciliary and optic nerves were divided, and the internal rectus muscle replaced as usual. The results were as heretofore reported. No trouble ensued from the neurotomy, and a good looking eye, in its natural position, has been retained.

The sixth case was one of unusual interest. The patient, a man 40 years of age, had lost the right eye six years since from corneal ulceration. A perforation in this membrane was stopped by a hernia of the iris, and, in time, a leucoma was left, in which the iris was incorporated, covering two-thirds of the cornea. One month before I operated, he was brought to me suffering from very foggy sight in the good eye, which he said was becoming, day by day, more smoky. He had suffered no pain in either eye, nor was there any injection. A careful ophthalmoscopic examination gave no sign of disease to explain the daily increasing amblyopia. Finding no tangible pathological lesion in his trouble, I advised strychnia, and placed him under the influence of this powerful drug. He continued the medication for two weeks, with no benefit, the sight undergoing a daily reduction, until he could only count fingers at four inches. As the ophthalmoscope indicated no cause for the deterioration in sight, nor were there any evidences of cerebral disturbance, I turned to the lost eye for a solution of the trouble, explaining it by some obscure sympathy. The lost eye was very markedly strabismic, and he was quite willing to give it up, if any benefit could be derived from its enucleation, for the good eye. I practised upon the lost eye neurotomy, but instead of bringing the muscle back to its old position, I left it free to permit the eye to straighten itself from the S^o of squint. Hæmorrhage was excessive, and great bulging of the eye-ball took place. The results of the neurotomy in this case fully sustained the belief that, in some way, the good eye had been seriously oppressed by the lost one, for reaction at once ensued after the operation, and within a week the very cloudy eye had regained much of its visual power. Fingers could be counted at fifteen feet and No. 16 of Jaeger's test types could be made out, with the eye strengthening every day. There is every reason to expect in this case a complete restoration of the lost visual function by the removal of nerve influence from the lost eye.

Now, gentlemen, you see before you the seventh case applying for neurotomy. My experiences in substituting neurotomy for enucleation have been so extremely flattering, that I am anxious for you to spread the good tidings, and to offer this great boon to such suitable cases of eye accident as may come under your care.

Some of you are aware that nerve-section is not always a permanent remedy. The temporary relief can always be se-

cured, as shown in section of the supra- or infra-orbital nerve, in cases of severe *tic douloureux*. In many of these cases, the pain comes back, and, in time, regains all of its intensity. The ends of the nerves, when simply separated by the knife, can, in time, re-unite and permit the nervous excitement to be conducted across the place of union, as if no severance of the nerve fibres had ever been effected. The position of the posterior eye nerves seems to be peculiarly fortunate to prevent this return. In the first place, these nerves are many. In the second place, they lie imbedded in loose, fatty tissue. In the third place, the cutting of the vessels along with the nerves, ensures an amount of blood extravasation and clot, which forces the socket tissues backwards, while it forces the eye-ball forwards. This blood effusion must separate the ends of the nerves for at least an inch apart, and at the same time so change the direction of the free cut ends as to mash some against the eye-balls, while the posterior free ends are pushed back out of line in the fatty tissues of the socket, where they become firmly fixed prior to the absorption of the blood clot behind the eye-ball. There is, therefore, every reason to expect, by this process, not only immediate relief from suffering, but permanent protection from all sympathetic irritation.

I can here offer this new operation, already well tested, as a substitute for enucleation in a certain class of cases, of great interest to all of us. It is not designed for all cases of lost eyes; for many are so marred in appearance, that their removal and after-use of an artificial eye is still the best course to pursue. It is when the lost eye retains its good looks that the neurotomy is especially applicable, and can be made use of early after the accident, as a preventive remedy of great value. Great care is necessary in readjusting the divided muscle, and also in limiting the socket section exclusively to the nerves and their "vascular companions." Experience will soon guide you aright in this matter.

As our seventh case is now under chloroform, and on the operating table, I will show you how the various steps of the operation are carried out.

(It is now four weeks since this seventh operation has been

performed. The results in this case confirm all that has been said in favor of the new operation. The patient was promptly relieved of the pain which had been her constant companion for four months. The eye moves well; has no squint deviation, and has already lost nearly all the injection consequent upon the division of the conjunctiva and the readjustment of the rectus muscle.)

Clinical Reports.

Gunshot Wound of the Abdominal Viscera—Malarial Complications—Recovery. By E. W. ROBERTS, M. D., Krohne, Texas.

On June 23d, Mark M., a "moonshiner," was shot by officers while effecting his arrest. The ball, which was of calibre 38, entered three inches above the umbilicus, and two inches to the left of the median line, and lodged in the intercostal muscles between the eleventh and twelfth ribs of the right side, about six inches from the spine. I saw the case eight hours after the shooting occurred, and found the patient still in a state of collapse, without perceptible pulse, and in an agony of fright and pain. He was much nauseated, and vomited small quantities of blood at intervals; and complained of severe pain extending along the right side of the spine, from about the first lumbar vertebra upwards. I had no occasion to probe the wound, as the hæmatemesis fully showed penetration of the stomach, and the position of the ball was easily ascertained by passing the hand along the ribs. I found subsequently that the transverse colon and right kidney were also injured.

Prognosis was unfavorable—more especially as he had taken two large doses of epsom salts prior to my arrival. After extracting the ball, I gave him morphia sulphate, gr. ss, in an ounce of dilute alcohol, for the purpose of paralyzing the vermicular motion of the intestines and preventing the escape of faecal matter.

Reaction soon taking place, I applied water dressings, and ordered R. Tinct. aconite (rad), f5j; water, q. s., to make f5iss. S. Teaspoonful every three hours.

I saw him again at 4 P. M. the same day—*June 24*. Reaction was well established, but he still complained of pain in the back and shoulder. There was great nausea, with oc-

casional vomiting of frothy mucus. He had some hiccup, and his urine was scanty and deeply tinged with blood. Pulse full and slightly accelerated. Ordered, in addition to the aconite, 20 grains of chloral hydrate every six hours, and one-half grain of morphia at night to control pain and the peristaltic motion; nothing but small quantities of cold water to be taken into the stomach, and complete rest and quiet enjoined.

June 25. The patient slept last night under the influence of the morphine and chloral for the first time since he was wounded. He has had no pain in the back since 10 o'clock this morning. He had a rigor at 12 M., and peritonitis rapidly developed. There was tympanites over the entire abdomen, and he complained of pain in the left iliac region. The stomach was very intolerant, rejecting the medicine, and the hiccup has become a prominent symptom. Tongue coated; urine bloody and slightly flocculent; pulse rapid and tense.

On the 26th, the symptoms were aggravated. Tympanites was marked, and pain extended over the entire abdomen—more especially in the right lumbar region. At 1 o'clock in the morning the patient felt better—both pulse and temperature being much reduced; but at 12 M., an exacerbation occurred, and at the time of my visit, at 2 P. M., he was worse than yesterday. I increased the dose of aconite to seven drops at the same intervals, and directed him to take spirits of nitre in teaspoonful doses three times a day; omit the chloral. To control the hiccup, cloths dipped in cold water were applied to the epigastrium.

The symptoms continued in full force up to 12 o'clock at night, when a general amelioration took place; and although the pulse rose at noon on the 27th, the patient is decidedly better. His urine is very flocculent, and contains a great deal of bile, but no blood, and his abdomen is only tender on pressure. His bowels (having been kept torpid throughout by giving him morphine every night) were moved on the 28th by a dose of magnesia sulphate, and he was allowed to drink chicken broth, which was the first food taken since he was wounded. To-day fever rose at noon, as it has done for the past three days, and ten grains of calomel was given, which was followed on the 29th by remedies appropriate to intermittent fever.

From this date, a rapid convalescence continued, and on the 14th of July the patient was discharged entirely well—the wound having healed by first intention, without discharge, and leaving scarcely a scar.

Wounds of this class show a small percentage of recoveries, even when treated under favorable conditions; and the result in this case was unexpected, as the patient lay in a partially unroofed hut on the prairie in the hottest month of the year, exposed to the almost uninterrupted rays of the sun, and an occasional shower of rain; while the horrible filthiness of the hut and its surroundings created an unbearable stench. Add to this the mental strain and nervous apprehension of the prisoner in the hands of officers of the law. The malarial complication was also of interest as adding to the proof of the peculiar tendency of malarial spores to seize upon the opportunity afforded by a lowered vitality.

I don't think I ever noticed a case of peritonitis complicated with malaria reported in our journals; nor until this case, had I ever seen such a combination.

Clinical Cases from "The Retreat for the Sick." Services of Prof HUNTER McGUIRE, M. D. Reported by HUGH M. TAYLOR, M. D., Assistant Demonstrator of Anatomy in Medical College of Virginia, etc., Richmond, Va.

Backward Dislocation of Humerus of Long Standing—Attempts at Reduction Unsuccessful.—Mr. Nicolson, æt. 60. The subject of this unique injury was received into the "Retreat" January 17th. He was writing late one night, about two weeks before his admission, and wishing to ascertain the state of the weather, walked out upon the porch. It was very dark, and whilst looking up, he walked too near the edge and stepped over the side. He says his impression was that he was falling upon his head. In his efforts to prevent this, he turned in his fall, threw his right hand in front of him, and received the entire weight of his body upon his right hand and forearm. The distance he fell was not more than six or eight feet, but being unconscious of his danger, and a very heavy man, he fell with great violence. When he recovered sufficiently from the shock to be assisted into the house, he was found to have bruised and lacerated his right hand and forearm, and to have sustained some serious injury to his shoulder. He was unable to raise his arm; it hung powerless by his side, and he suffered excruciating pain in his shoulder, down his arm, and in his hand. Seeing that there was some displacement of the head of the bone, his son

begged him to let him pull his arm, but the fear of additional pain was too great for him. Medical aid was not obtained for some hours, when he was seen by Dr. Frank Garrett, of Ringwood, Halifax Co., N. C. The enormous swelling made a positive diagnosis almost impossible. The Doctor, however, suspected a dislocation, and made some efforts to reduce it, but without success. He then prescribed some evaporating lotion, and left with the expectation of seeing him again the next day. Personal sickness prevented him from returning during the following day, and the patient went without medical attendance for four weeks. In ten days after injury, he got up and rode about his farm. The swelling in his shoulder had pretty much subsided; but his arm and hand continued swollen long after the swelling about his shoulder had disappeared; acute pain, starting in his shoulder, extending along the track of the median nerve into the forearm and hand, continued to torment him day and night. Four weeks after the accident, he consulted Dr. Whitehead, of Battleborough, N. C., who examined him, and thought there was still a dislocation. He made forcible extension, and then put his arm in a sling, and fastened it with a bandage to his side. The patient thinks the temporary relief which he experienced was in consequence of the rest and support, and not from any change in the position of the head of the bone. Seven weeks after the accident, he consulted Dr. Whittaker, who also attempted reduction by extension and counter-extension. After each effort at reduction, the patient thinks there was a slight improvement in the motion at the shoulder-joint.

When he was admitted into the "Retreat," a casual inspection showed a loss of the usual rotundity, and a swaggering or drooping of the right shoulder. In front, the whole shoulder appeared flattened; behind it was unnaturally prominent. The head of the humerus could be both seen and felt under the spinous process, where it formed a distinct tumor as large as an orange. Upon a closer examination, there was found a deep depression under the acromion, and an unusual prominence of this process. The distance between the coracoid process and the head of the humerus was increased. The space usually occupied by the head of the bone was empty, and under the axilla, the rim of the glenoid cavity could be felt. The axis of the shaft of the humerus was directed towards a point posterior and a little below the glenoid cavity. The patient thinks his arm is longer since the dislocation, but this statement could not be made positive by

measurement, because his left arm was an inch shorter than natural as the result of a fracture. The tendons of the pectoralis major and subscapularis were drawn tight, and felt like cords. There was impaired motion in every direction. The arm was rotated inwards, and any attempt to rotate it outwards was attended with pain. This inward rotation and pain showed that the tendon of the subscapularis was not ruptured but violently stretched. The action of the deltoid was very much limited. He was unable to raise his arm as high as his shoulder, and unable, whilst his elbow was against his side, to get his hand to his mouth, or to the opposite shoulder.

The treatment adopted was a gradual daily stretching preparatory to an attempt at reduction.

On *January* 17th, 18th, 19th and 20th, respectively, his arm was pulled and manipulated for ten or thirteen minutes.

On *January* 21st, he was thoroughly relaxed with chloroform, and every effort made to dislodge the bone from its abnormal position. It refused, however, to yield a particle, and the attempt had to be abandoned. In view of his age, the danger of rupturing important blood-vessels, and the good motion which the passive motion had already brought about, it was thought best to advise him against any further interference, and to encourage him by telling him that nature would, in time, make a very serviceable joint for him.

The extreme rarity of this accident, and the clear, unmistakable symptoms which this case presented when it was admitted into the "Retreat," makes it one of special interest. Sir Astley Cooper, in thirty years of practice, only met with two cases. Brausby Cooper could only find a record of seven others, which he published in full in his work on dislocations. Hamilton, in his work on *Dislocations and Fractures*, has added only a few more cases to the literature of this subject.

Resection of Bone with the Dental Engine.—It is a very current opinion that the "dental engine" will, in the future, play an active part in the domain of operative surgery; and as we had an opportunity a few weeks ago of testing its efficacy, I wish to make a short report of the case.

Lula Spencer, white, four years of age, was brought to Dr. McGuire in April by Dr. Batt, of _____ county, Va. The following history of her trouble was written by her mother for me: "The little girl was born in 1875. Owing to a deformity in her ankle, she did not walk until she was two years old. Six months after she began to walk, while

playing out in the yard with a chair, it fell on her ankle and broke it. She remained in that state until the 20th of April, 1879, when she was carried to Richmond to be under Dr. McGuire's care." When she was admitted into the "Retreat," her foot and ankle were bent back under her leg almost at a right angle. The bend corresponded with the junction of the diaphysis and epiphysis. The union which had resulted was too firm to admit of the legs being straightened, and the only alternative was to remove a V shaped piece of bone from the front of the tibia and fibula over the site of the fracture. With the assistance of Dr. Thomas Pleasants, who furnished the dental instrument, the section of bone was easily and quickly removed. It required some care to protect the soft parts from the revolving saw. This, I think, was the only difficulty with which we had to contend.

The operator handles and guides the edge of the saw with as much ease and delicacy as he would the point of a pen or scalpel. With it, a clean, smooth cut can quickly be made through the hardest bone, and without leaving any pieces of bone to exfoliate and work their way out. With drills, trephines and circular saws, and knives of different sizes and shapes, the application of this instrument will be almost unlimited.

Stone in the Bladder with a Stick as a Nucleus—Lithotomy and Recovery.—Ro. Thomas, white, æt. 16 years, was sent to Dr. McGuire, March 17th, by Dr. W. R. Putney, of Buckingham county, Va. He had been suffering with symptoms of stone since May, 1878. When admitted into the "Retreat," his condition was not favorable for an operation, and some weeks of preparatory treatment was necessary. During that time, I saw him frequently, but he never once intimated the presence of the stick in his bladder.

As soon as his condition favored it, I performed lithotomy by the left lateral method, and removed a phosphatic stone, three inches long, one inch in diameter, and pierced through its long axis by a piece of stick which looked like the small end of an unvarnished pen handle. As soon as he recovered from the chloroform, he made a full confession. He said that it had been in his bladder since last May; that he had no special object in putting it in there—he was only trying to follow the example of a companion, who put a long willow switch in his bladder and withdrew it, and urged him to try it. But instead of using one long one, as his companion did,

he shoved in, one after another, seven short pieces. He got all of them out but one by pressure along under his penis, but one of them went so far he could not reach it, and he was ashamed and afraid to say anything about it.

While upon the subject of stone, I may mention two cases which have been under Dr. McGuire's care recently, and which presented some curious features.

In the first case, the stone was so small it was passed whilst the patient was undergoing some preparatory treatment for the operation of lithotrity, and yet this small stone gave rise to the acutest suffering and the most distinctly marked symptoms. On the other hand, a case was admitted into the "Retreat" a few days ago with symptoms hardly distinct enough to suggest the presence of stone, and yet Dr. McGuire removed, by lithotomy, a stone which weighed four ounces and six drachms.

Gunshot Wound of the Stomach and Œsophagus—Recovery.

By T. B. WILKERSON, M. D., Young's Cross Roads, Granville Co., N. C.

Samuel L., æt. 22 years, was wounded March 5th, 1869, by a slug and small shot, discharged at short range from a smooth-bore musketoon, in the hands of a "midnight negro assassin." I saw him an hour after he was wounded. The man lay on his back, with anxious facies, surface blanched and bathed in a clammy perspiration, feet and hands cold, pulse exceedingly weak and feeble, constant nausea, and had vomited blood freely several times; there was also great pain in the epigastrium. On opening the clothes in front, a ragged wound was brought to view, about two inches beneath the sternum—one and a-half inches to the left of the median line. Through the rent, the finger could be passed into the cavity of the stomach. Some of the fluid contents of the latter viscus had escaped through the wound during the efforts in vomiting. A close examination disclosed no point of exit made by the missile.

Just above, and a little to the left of the sterno-clavicular articulation, another small wound was noted, barely admitting the point of an ordinary-sized probe. This wound passed obliquely inwards towards the median line, but no satisfactory terminus could be found.

Fully cognizant of the critical condition of the patient, knowing the great danger to be apprehended from an escape of fluid into the peritoneal cavity, and trusting to the localized pain as a diagnostic sign, that but one wound of the organ existed, with a view of gaining union by the first intention, whilst the injured parts were held in the clasp of a pair of forceps, a common-sized toilet sewing-needle, held in a needle-holder, was entered on one side, half an inch distant from the wound, passing through the abdominal parietes and coats of the stomach, entering and emerging on the opposite side, at a point equi-distant from the point of entrance. Whilst the parts were steadied on this needle, with a bistoury, an elliptical stip, a little over a line in diameter, was cut from the edges of the wound, including in this incision the coats of the stomach and walls of the abdominal cavity, thus leaving a clean-cut marginal boundary. Another needle was now passed a quarter of an inch distant from the preceding one, transfixing and escaping from the soft parts at the same distance from the line of wound as the first. The edges of the incision were then accurately coaptated by the fingers, and a waxed thread was securely fastened around each needle separately; narrow strips of isinglass plaster were then neatly applied to the interspaces between the needles, with a wider piece drawn diagonally across these, hermetically sealing the wound. Clothes moistened in olive oil, and retained by a wide bandage, completed the dressings. To allay the vomiting and arrest the hæmatemesis, English meal-bran poultices, sprinkled on their upper surface with powdered ice, were kept on the epigastric region. There was but little external bleeding from the first, and the internal hæmorrhage soon ceased after the accurate closure of the wound.

The condition of the patient for the first forty-eight hours was extremely bad. There was no reaction from the first shock, and so alarming did the latter become that the pulse was scarcely perceptible, and hiccough come on. Teaspoon doses of iced brandy julep were given at short intervals to keep aglow the vital spark until the reparative efforts of nature could be brought to bear—exercising, at the same time, great care not to push the stimulus so as to bring on an inordinate reaction. Free doses of morphia were given to quiet the severe pain complained of over the region of the stomach; but little nutriment was allowed for the first ten days, abstaining from the use of nutritive enemata throughout the treatment, for fear these might produce fæcal movements;

for it is a well-established surgical maxim, that whenever any portion of the alimentary canal is wounded—be it from the cardiac orifice to the canal outlet—perfect quiescence should be maintained; for if one portion of the canal be moved, the other portions will necessarily feel the vermicular effort.

On the third day, febrile symptoms began to light up; the tongue was coated with a brownish fur; the mouth was dry, and there was marked increase of surface heat, with intense thirst. Some tympanites and tenderness existed over the epigastrium, but these unfavorable symptoms soon subsided.

On the tenth day, there was a free alvine evacuation. In the fecal discharge, was found an oblong leaden slug, half an inch in length, and one-eighth in thickness; and likewise, a small squirrel shot.

On the twelfth day, the wound having firmly united, one of the needles was removed, and the other on the fourteenth. This man continued to improve, and finally made a good recovery.

This case offers one of the rare examples of a gunshot wound of the stomach ending in recovery. Out of the 64 cases reported from the Federal army during the late sectional war, 63 died—only one survived. The statistics of the Confederate army are so meagre that it is impossible to arrive at any definite conclusion of the number reported, or as to the final result of the cases; but it is fair to presume that our success was no better than that gained by the Federal surgeons. Out of the large number reported at different times by surgical authors, only five or six successful cases are noted. The most interesting amongst the group and best known to the profession, is the Canadian, Alexis St. Martin, who was left with a fistulous orifice in the stomach that offered a rich experimental harvest to physiologists in determining the digestive powers of the gastric fluids on various articles of food. The great danger from this class of wounds is the nervous shock induced by the injury of so important an organ, and the extravasation of the fluid contents of the stomach into the peritoneal cavity. An empty condition of the viscus lessens the latter danger; but the main, and almost only, hope for the patient is in the early, accurate closure of the wounded viscus. Freshening up of the wound offers

two chances for a safe union; for should the opening in the stomach and abdominal cavity fail to unite, there is still left the hope of a union between the applied serous surfaces of the stomach and the parieties of the abdomen around the wound, in this way affording a safe fistulous conduit for the fluids. But should the surgeon attempt an independent closure of the wounded organ, and that operation fail, which it is very liable to do, owing to the irregular spasmodic contractions of the stomach, there is left no alternative; death will certainly ensue. It will be seen that the prolongation of life in the St. Martin case was due at first to a union between the stomachal and the parietal peritoneum around the wounded orifice; and in the case of the man, Bowes, reported in the Federal archives, the existence of a fistulous orifice for some time proved that there must have been a union of the coats of the stomach and the abdominal cavity; for otherwise, the fistula would have been incompatible with life.

A Case of Obstinate Morning Sickness Cured by Ingluvin after Failure of Other Agents. By R. L. PAYNE, M. D., Ex-President of the Medical Society of North Carolina; Member of the North Carolina State Board of Medical Examiners, etc., Lexington, N. C.

Mrs. R. S., a young married woman, eighteen years of age, came under my care March 27th, 1878, and as her case presented some peculiarities, I am induced to make the following report of it:

She was at this time advanced to the third month of pregnancy, and desired me to prescribe for the relief of obstinate vomiting, which she said began to be troublesome, as well as she could tell, at the beginning of pregnancy. At first it was confined to the early morning hours, but it had continued to become more aggravated, until now she vomited regularly throughout the whole twenty-four hours, whenever anything was taken into the stomach.

Before conception, she was a stout, rosy-cheeked, and somewhat fleshy woman; but when I was first called to her, she was a pale, hollow-eyed, emaciated creature, so feeble, indeed, as to be scarcely able to walk alone. Her pulse was frequent and feeble, beating 120 times a minute; temperature about 100°F.; tongue red and dry; and bowels constipated.

The skin and the whites of the eyes were very decidedly tinged with yellow, as if in a mild case of jaundice.

I gave her six grains of calomel, to be followed on the next morning by a simple enema of soapsuds and salt, and prescribed the following infusion, which I found some years ago in the *Baltimore Medical Bulletin*, and which has been of signal service to me in many cases of morning sickness:

R. Pulv. colombo..... $\bar{5}$ j.
 Pulv. ginger..... $\bar{5}$ j.
 Pulv. senna..... $\bar{5}$ ss.
 Boiling water..... \odot j.—M.

Of this she was directed to take a wine-glassful one-half hour before each meal.

March 30.—Saw the patient again, and found her not in the least degree improved, except that her bowels were in a more soluble condition. I continued the infusion, and prescribed in addition ten grains of the subnitrate of bismuth three times a day; and as she was exceedingly feeble, and retained absolutely nothing upon the stomach, I ordered strong beef-tea and brandy by enema every six hours. I also prescribed champagne, and as she particularly craved ice and acidulated drinks, they were allowed her *ad libitum*.

April 2.—Patient was no better; vomited almost incessantly, but had retained the injections of beef-tea and brandy very well; had been crying for ice and lemonade. The champagne had not been procured, but she had been taking, instead of it, a very excellent article of home-made grape wine.

All remedies by the mouth were now discontinued except the wine and the bismuth, to each dose of which was added one-fourth of a grain of the sulphate of morphia. I know that opium is not highly recommended, and is not generally well borne in cases of morning sickness; but my patient was greatly in need of sleep, and I determined to try it.

April 5.—Patient was in all respects worse; vomited night and day; had slept none since my last visit. I gave one-fourth of a grain of morphia hypodermically, and prescribed twenty grains of the bromide of potassium three times a day, in the tincture of ginger, and nothing else by the mouth. Continued the soup and brandy by enema.

April 9.—Patient had slept more since I last saw her, but was not any better in any other particular. I continued the injections and the bromide, in twenty grain doses, at bedtime only, and prescribed the following powders:

R. Oxolate of cerium.....gr. x.
 Subnitrate of bismuth.....gr. xxx.

M.—Make ten powders. S.—One powder every six hours.

This combination would have been given sooner, but some days elapsed before the oxalate of cerium could be procured. I forgot, too, to mention before this that milk-punch was allowed her all along whenever she desired it.

April 12.—The poor thing was very evidently worse. Pulse 130; skin cold; lips blue; eyes sunken; countenance haggard—and she vomited every thing swallowed—even ice, ice-water or lemonade. I continued the soup and brandy injections, and gave her the following diluted tincture of iodine:

R. Tinct. iodine.....gtt. xxv.
Alcohol.....℥ij.

M. S.—Three drops every four hours in a teaspoonful of ginger-tea.

April 15.—The patient was still living, but there had been no change for the better; she was exceedingly feeble, but still retained the injections for several hours after they were given. The last prescription was continued, and she was allowed whatever she might fancy.

April 17.—Very little change since I last saw her; however, she was certainly not at all improved. The mouth of the womb was now dilated (as suggested by Copeman, of Norwich, England) by introducing the end of the index finger slowly and carefully within the external os, and forcing it gently up to the internal orifice, where it was suffered to remain for several minutes. I prescribed lime-water and milk, and continued the injections, and the milk-punch also, whenever she would take it; and this constituted the only treatment pursued whilst I was trying the effect of dilatations. The dilatations were repeated at regular intervals; that is to say, on the 19th, 20th, and 22d days of April without the least apparent benefit.

April 24.—I dilated with the finger as above described, and also with Atlee's dilator, because I feared that perhaps the dilatation with the finger alone was not sufficient, as no good results had followed. The woman was evidently no better; she retained nothing upon the stomach, and was exceedingly prostrated. I was disappointed to see no good follow dilatation, since it had been so highly vaunted.

April 25.—Patient was no better. Dilatation having so utterly failed to bring relief, I next resorted to cauterization of the os externum and cervical canal with the solid stick of nitrate of silver, as recommended by Dr. Jones, of Chicago, and afterwards so highly approved by Dr. J. Marion Sims. I cauterized most thoroughly, and I thought that surely this would not fail, but it did fail utterly!

April 26.—She appeared to be *in statu quo*—no better, no worse. I came to the conclusion that the patient had a fair share of the *vis vitalis*. I prescribed carbolic acid three times a day.

April 27.—Patient still about in the same condition as when I last saw her. Now her tongue was dry and red; skin dry and harsh and cold; pulse very frequent and very feeble. She spoke in a whisper, and longed for nothing but ice. I told the family I feared the end was nigh! I had given it as my opinion sometime before this, that it was best to bring about abortion in order to give the poor sufferer the best chance for life; but then she was opposed to it; they were, also, and my advice was not taken. Now all the parties were very anxious to have it done. With my patient so extremely ill, and apparently so near to death, I was very loth to assume the responsibility of such a proceeding; yet I really saw no other possible chance to save her. Consequently I determined to adopt this chance as a *dernier resort*. I knew full well that if she died there would be some to say I killed her; and I knew also that if she died with it not done, my conscience would ever trouble me.

Accordingly on the 28th of April, the os and cervix uteri were again dilated by the use of Atlee's dilator, the finger, and a large sponge tent, which last was passed entirely through the os internum and suffered to remain in position about twelve hours. Then Simpson's sound was carefully introduced to the fundus, and carried as carefully as possible (in order not to break the membranes) around the whole inside of the womb between the membranes and uterine walls. That night she began to have regular pains, and on the 30th of April she aborted. The vagina was kept securely plugged with carbolized cotton tampons, so that she lost but little blood while aborting, or subsequently. From this time she slowly improved, growing better every day until about the middle of May. Her lochial flow continued about twelve days after the abortion—becoming less each day until it ceased. Her pulse became less frequent and gained strength; appetite returned; stomach retained food; color improved; strength and flesh began to return, and I thought that my patient was hastening to a speedy recovery.

But on the 16th of May she began to vomit again, and speedily lapsed into a condition to all appearances identical with the one existing before the abortion. Now, I freely confess, I was at a loss for a diagnosis. By the most careful examinations I could detect no inflammation or other diseased

condition of the uterus or its appendages, or of any of the pelvic viscera; consequently I could not now believe that the continued vomiting was dependent upon sympathy between the stomach and pelvic organs. Had the long persistent and unnatural action of the stomach induced inflammation or ulceration of that viscus? I was not exactly prepared to say, but I prescribed lime-water and milk, gave small particles of ice, applied a large blister over the epigastrium, and sustained her mainly by soups and brandy by the rectum.

The next time I visited her, she was so little improved that I substituted bismuth for the milk and lime-water, and directed her to take nothing but these and ice by the mouth. The injections were regularly given. I saw her very often after this, and gave her, at different times, calomel and opium, creasote, oxalate of cerium, nitrate of silver, pepsin, lactopeptine, etc. After all other treatment had failed, supposing that her condition might be caused by malarial poisoning, I gave quinine freely by the mouth, by the skin, and by the rectum, without any perceptible benefit. At last, in spite of the untoward circumstances, she began slowly to improve, little by little, being sometimes worse, sometimes better, but gaining a very little all the while until September 3d, when I discharged her.

And now I must make an honest confession, and freely admit that I do not think she derived any special benefit from any remedy, except the ice and such as were given by enema. I think, too, that she would have died had she not aborted. What was the special lesion? what the diseased condition? In common parlance, what was "the name of the baby?" "This deponent saith not," not because he does not know, of course not! *We doctors always know!*

Was it sympathy between the stomach and uterus? Was it acute or chronic gastritis, or gastric ulcer? Was it simply the effects of malaria, or was it septicæmia? Was it chronic meningitis? Somebody please say. I mean after the abortion. Habit, they say, becomes a second nature. Was the vomiting kept up after the abortion by habit?

The case was to me a very interesting and very troublesome one. And there is another point of interest connected with it. The woman is pregnant again—gone about eight months. She was troubled with morning sickness in the early months of the present gestation.

I prescribed five grains of ingluvin (prepared by Warner & Co.), four times a day; it acted like a charm, and she is now happy and expectant.

Correspondence.

A New Vaginal Syringe.

Mr. Editor,—Permit me to call your attention to a new vaginal syringe, which is represented in the accompanying cut. I am not aware that this instrument has been introduced to the profession—at least, not in this city; and as I have been using it for the past six months, to the delight of both my patients and myself, I deem it worthy of notice. It is manufactured by the well-known instrument-makers, Chas. Willms & Co., of this city, and can be procured of him at about the same price as other syringes.

As will be seen by reference to the cut, this instrument consists of a cylindrical vessel for holding the fluid to be injected. From near the bottom of this, a pipe projects, on which is attached a rubber tube, connecting with the syringe or nozzle. At the further extremity of this pipe, is a stop-cock to regulate the flow of the contents of the cylindrical vessel. A short distance above the stop-cock, as seen in the cut, is a flanged piece of rubber or metal, which, when applied over the vulva, holds the water or other injected fluid in the vagina. Above this flange, as seen in the cut, is a nozzle or end, which can be lengthened or shortened to fit the length of the vagina. The dots marked on “swell” of the nozzle, immediately above the flange, represent openings for the return of the fluid that may be injected in the vagina. Under the flange is another tube which connects with the above openings, and allows the refuse injected fluid to be passed off into any vessel that may be placed for the purpose.



Among the many advantages of this instrument over the ordinary ones, I would mention its adaptation to the use of hot water, which, in my opinion, heads the list of all lave-

ments for the uterus. The water passing through the main tube of the syringe into the vagina can only find its escape through the perforated piece which connects with the tube, and then into the vessel prepared for its reception, thereby obviating the great objection to this remedy, viz., the scalding of inner portion of thighs and buttocks on making its exit from the vagina.

Another advantage is that the vagina is well filled before any of the medicament used can make its escape—consequently spreading out the over-lapping folds of the mucous membrane, and allowing the remedial agent to come in contact with every portion of its surface, which is almost indispensable in the successful treatment of vaginitis, or any disease of the uterus in which there is a profuse muco-purulent secretion.

Hoping any of the profession who have the good fortune to read your journal, may give the instrument a trial, and save their patients much labor and annoyance,

I am, very truly, yours, &c.,

J. H. SCARFF, M. D.

Baltimore, Md.

Original Translations.

A Resume of the Ophthalmoscopic and Functional Signs of the Internal Diseases of the Eye. By Dr. ARTHUR KOHN, of Paris. Translated by Dr. JAQUELIN AMBLER MONCURE, Richmond, Va.

HYPERMETROPIA.—You can see the optic disk, with the ophthalmoscopic mirror, by placing yourself very close to the eye of the patient. The blood-vessels move in the same direction as the observer. The degree of hypermetropia is determined by placing before the patient's eye consecutively, a series of convex glasses, until you can no longer see the vessels of the fundus oculi. The number of this last glass defines the degree of hypermetropia.

MYOPIA.—It is impossible to see the fundus oculi with the ophthalmoscopic mirror, even when you place yourself very close to the patient's eye. At a distance, with a direct illumination, one sees an actual inverted image of the fundus

oculi. The blood-vessels move in the opposite direction from the movements of the observer.

ASTIGMATISM.—The observer does not see the perpendicular and the horizontal vessels at the same distance. The optic disk is deformed, which is lengthened both in its horizontal and in its vertical diameters, according to the distance from which it is viewed.

SUBLUXATION OF LENS.—*Functional Signs*—Trembling of the iris; confused sight, and the anterior chamber is enlarged towards one of its borders.

Ophthalmoscopic Signs.—On one side of the papilla, the opaque border of the lens is seen.

COMPLETE LUXATION OF THE LENS.—The same *functional signs* as in subluxation. There is, besides monocular diplopia, vertigo and hypermetropia.

The *ophthalmoscope* reveals a black semi-circle dividing the optic disk in two; the fundus oculi looks red above and below the black circular line.

CATARACTS.—*Capsular*—Irregular, white, mother-of-pearl tint.

<div style="writing-mode: vertical-rl; transform: rotate(180deg);"> LENTICULAR CATARACT. </div>	{	<i>Liquid</i> —Milky, floating nucleus. <i>Soft</i> —Whitish, not milky, striæ in the shape of rays. <i>Semi-soft</i> —Yellowish, amber-tint in the centre, and the same symptoms as the foregoing at the periphery of the lens. <i>Hard</i> —Yellowish, amber-tint, that may border on black.
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<div style="writing-mode: vertical-rl; transform: rotate(180deg);"> ZONULAR. </div>	{	After the dilatation of the pupil, the observer sees a round, opaque, central spot distinctly traced on the red fundus oculi.
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<div style="writing-mode: vertical-rl; transform: rotate(180deg);"> POSTERIOR POLAR. </div>	{	The posterior pole is displaced in the opposite direction from that of the motions of the eye. <i>Ophthalmoscope</i> —The existence of the slightest opacity of the lens in the pupillar field betrays itself by black striæ.
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GENERAL HÆMORRHAGE OF THE VITREOUS HUMOR.—*Functional Sign*—Sudden loss of sight.

Lateral Illumination—A red, sanguineous tint.

Ophthalmoscope—The fundus oculi cannot be illuminated. Phosphenes are preserved.

FLOCCULI OF THE VITREOUS HUMOR.—*Functional Signs*—The patient sees one or more movable spots, of various shapes, in the pupillar field.

Direct Illumination—One or more black or greyish movable spots in the interior of the eye, which pass before the red fundus oculi.

FLOCCULI IN THE SHAPE OF A SPIDER'S WEB.—Functional Signs—The patient complains of a cob-web, or of flies before the eyes, in whatever direction he may look.

Ophthalmoscope—Fine filaments crossing each other in every direction like a net-work; the net-work is found at different depths in the vitreous humor. It is necessary to draw nearer and then move further off from the patient in order to see them.

SPARKLING SYNCHYSIS.—Functional Sign—The appearance of fog before the eyes.

Ophthalmoscope—In making the patient's eye move, the observer sees passing in the pupillar field sparkling corpuscles, like a shower of gold or silver.

DISSEMINATED ATROPHIC CHOROIDITIS.—Functional Signs—Fatigue of the eyes by work and muscæ. Generally the functional signs are not strongly marked, unless the disease involves the macula, in which case there is weakening of the acuteness of vision.

Ophthalmoscope—Round, white spots, environed by black. Vasa vorticosa denuded in places. Congested optic disk.

GENERAL ATROPHIC CHOROIDITIS.—Functional Signs—Fatigue of sight; peripheral scotoma; diminution of acuteness of vision.

Ophthalmoscope—Very broad, white spaces, with pigmentary deposits. Those spaces present a distinct, strongly marked outline; they are furrowed by blood-vessels.

LACERATION OF CHOROID is the result of traumatism.

Ophthalmoscopic Signs—The sclerotic is of a mother-of-pearl white, is seen through the labia of the wound; anterior to the sclerotic pass the vessels of the retina.

COLOBOMA OF THE RETINA.—Functional Signs—There is no sight in that portion of the visual field corresponding to the coloboma.

Ophthalmoscope—White spot on the red fundus resembling an atrophied choroid, with distinct outlines. Pigmented deposits at the limit of the atrophied spot, which extends from the periphery towards the optic disk.

SYPHILITIC CHOROIDITIS.—Functional Signs—The disturbance of sight increases by degrees. The extent of vision at a distance is diminished. Muscæ volitantes and nebulae exist with continual motions of cob-web; photopsia; hemeralopia; sensitiveness to light; remission in the disturbance of

sight; periodical cæcilas; annular scotoma; visual field diminished concentrically; objects seem shrunken; photophobia and daltonism.

Ophthalmoscope—Filiform flocculi of the vitreous humor; optic disk turbid and pale; exudative spots, bordered with pigment, most numerous at the periphery.

DETACHMENT OF RETINA is found usually in myopic persons. *Functional Signs*—Sudden loss of that portion of the visual field corresponding to the detachment of retina. Acuteness of vision is greatly diminished. When objects appear broken, the detachment of the retina extends to the region of the macula. The patient sees sparks or streaks like lightning. At the outset of the affection, everything seems of a green or a blue or violet color.

Ophthalmoscope—A greyish white tint, with irised reflections of the fundus oculi on the site of the detachment of the retina. Tortuous vessels forming crotchets at the point of detachment.

CONGENITAL PIGMENTED RETINITIS.—*Functional Signs*—Hemeralopia, beginning in infancy. Concentric diminution of the visual field. Acuteness of sight preserved. This affection usually exists in both eyes, and progresses slowly.

Ophthalmoscope—Irregular pigmented deposits, striæ in the retina, thicker towards the ora serrata, resembling lace. Vessels of retina very small. Optic disk of roseate hue. Posterior polar cataract exists quite frequently. This disease advances by degrees.

SYPHILITIC PIGMENTED RETINITIS.—*Functional Signs*—Hemeralopia. Concentric diminution of visual field. Dimness of sight. Photopsia. Partial dyschromatopsia.

Ophthalmoscope—Veiled papilla. Disseminated pigmented spots of a circular form. Disseminated atrophied choroiditis. Flocculi of the vitreous humor. Sometimes iritis.

ALBUMINURIC RETINITIS.—*Functional Signs*—Binocular affection.

Ophthalmoscope—Apoplexies of retina in the shape of lines. Greyish white exudations in the posterior segment, which, being anterior to the blood-vessels of the retina, conceal them entirely. Serous infiltration of optic disk. Fan-shaped, white spots in the region of the macula.

GLYCOSURIC RETINITIS.—*Functional Signs*—Premature presbyopia. Binocular affection. Acuteness of vision weakened. Chromatic disturbance. Photopsia.

Ophthalmoscope—A normal optic disk. Hæmorrhages and exudations of a round shape along the vessels. Cataract.

APOPLECTIC RETINITIS.—*Functional Signs*—Sudden disturbance of sight. When in the macula, everything seems to the patient of a red, blue or green color.

Ophthalmoscope—Red spots of different shapes and sizes, and often mixed with exudations.

APOPLEXY OF THE MACULA.—*Functional Signs*—Sudden loss of central vision.

Ophthalmoscope—Serous infiltration in the macula. Apoplexy.

EMBOLISM OF THE CENTRAL ARTERY.—*Functional Signs*—Sudden monocular loss of sight. Absolute monocular cæcitas. Return of luminous perception after a few days, on the temporal side, showing a marked diminution of visual field on the nasal side.

Ophthalmoscope—Nebulous optic disk. At the outset of the affection, a great part of the retina looks opalescent. Red spots on the macula. Voluminous and sinuous veins. The central vessels on the optic disk are filiform. Some exangious branches.

PARTIAL EMBOLISM.—*Functional Signs*—The visual field corresponding to the embolus is lost.

Ophthalmoscope—The arteries are either very small, or have entirely disappeared. The retina is opalescent in the vicinity of the artery. The rest of the retina is normal.

OPTIC NEURITIS.—*Functional Signs*—Mydriasis. The affection shows itself slowly. The visual field remains long intact peripherally. The acuteness of vision is diminished. It is binocular when due to a cerebral cause, and monocular when an orbital or syphilitic affection.

Ophthalmoscope—The optic disk seems wider than it is when in a normal condition. There is infiltration around the disk. The disk is prominent. A greyish white tint. At the outset, the capillaries are very much developed. The veins are large and varicose. Exudations. Apoplexy in the vicinity of the disk. The retina is healthy at the periphery.

NEURO-RETINITIS.—*Functional Signs*—Mydriasis is less marked than in optic neuritis, and the same functional disturbance exists as in optic neuritis.

Ophthalmoscope—Infiltration of the edges of the disk, and of a large surface of the retina. Numerous apoplexies.

GLAUCOMATOUS EXCAVATIONS OF THE DISK.—*Functional Signs*—Visual field diminished on the internal (nasal) side. The diminution of acuteness of sight occurs, but appears very late.

Ophthalmoscope—Double contour of the disk with depres-

sion in the centre. The disk is of a mother-of-pearl white. Arteries small. Veins congested. Blood-vessels form an elbow or solution of continuity on the disk. Spontaneous pulsation of the central artery.

PHYSIOLOGICAL EXCAVATION OF THE DISK.—*Ophthalmoscope*—The disk is white in the centre, and normal at its periphery. The blood-vessels on the disk are not diminished in volume. There are generally no elbows formed by the vessels at the disk, and when they do exist, they are but slightly marked.

ATROPHY OF THE DISK (ATAXIC).—*Functional Signs*—Myosis. Nebulae, concentric diminution of peripheral, visual field. The patient does not discern the red and green colors. Cæcitas. Patient walks with his head raised high, as though he was seeking for light.

Ophthalmoscope—The disk is white, like mother-of-pearl, with regular outlines. The blood-vessels retain their volume a long time. Absence of capillaries on the disk.

ATROPHY OF THE DISK DUE TO OPTIC NEURITIS.—The *functional signs* are the same as in ataxic atrophy.

Ophthalmoscope—The disk is white, with irregular, jagged edges. Whitish circle around the disk.

TUMORS: SARCOMA OF THE CILIARY CIRCLE.—*Functional Signs*—Progresses slowly. The patient complains of an opaque veil which descends from the upper part of the visual field.

Ophthalmoscope—A round, opaque, black spot is seen behind the iris in the field of pupil. Complications. Detachment of retina followed by glaucoma.

CYSTICERCUS.—*Functional Signs*—Disturbance of sight is gradual. Sight becomes veiled. When the disease has progressed further, the central vision is lost to such a degree, that nothing can be discerned.

Ophthalmoscope—Opacities in the vitreous humor. A bluish white mass, usually of an elongated, ovoid shape, narrowed at the extremity corresponding to the head of the entozoa, sometimes having the power of moving.

SYMPATHETIC OPHTHALMIA.—*Functional Signs*—Pensitiveness to light. Muscæ. Range of sight diminished. Photophobia. Lachrymation, then weakening of central vision. Photopsia.

Ophthalmoscope—Turbid vitreous humor. Nebulous disk.

AMBLYOPIÆ WITHOUT LESIONS—TOXICAL AMBLYOPIA.—*Functional Signs*—A binocular affection. Disturbance of sight comes on suddenly, and remains stationary. The patient can hardly read No. 6 of the typographical scales. Per-

sons and objects seem to be covered by a livid tint. Hallucinations of sight. Less foggiess in the mornings. Perversion of the chromatic faculty, confounding gold and silver pieces.

Ophthalmoscope—The fundus oculi is normal.

HYSTERICAL AMBLYOPIA.—*Functional Signs*—The left eye is usually amblyopic. Internal lateral hemiopia. Acuteness of vision is so much impaired that the patient cannot count the fingers that are held before him.

Ophthalmoscope—No lesion of any kind in fundus oculi.

GLYCOSURIC AMBLYOPIA.—*Functional Signs*—There are frequently central scotoma; some lessening of visual field in the shape of hemiopia. The patient can distinguish colors.

Ophthalmoscope—No lesions of fundus oculi.

Analysis of the urine shows glycosuria.

HEMIOPIA.—*Functional Signs*—It is impossible for patient to see his way, especially at night. Central vision is preserved. Absence of half of the visual field, following a vertical line, slightly inclined, either to the right or to the left.

Ophthalmoscope—No lesions in the fundus oculi.

AMBLYOPIA AND AMAUROSIS WHEN SIMULATED.—*Functional Signs*—The pupil is contracted under the influence of light, or under the influence of convergence. A prismatic glass of 15 degrees, with its base turned upwards or downwards, placed before the sound eye, the other eye remaining open, will produce a diplopia if the amaurosis is simulated.

Ophthalmoscope—No lesions in fundus oculi.

Proceedings of Societies.

Baltimore Academy of Medicine.

The bi-weekly meetings of the Baltimore Academy of Medicine were resumed on the second Tuesday in October, with a full attendance of the leading physicians of the city.

Moluscum of Eye-Lid.—Dr. J. J. Chisolm exhibited a patient from whom he had removed a large tumor of the left eye-lids four days since. The patient, a man aged 59, had "lumps" all over his body from his earliest recollection. The case was one of moluscum. There is not a half inch of surface on his trunk clear of these dermic or sub-dermic growths. They vary in size from a shot to a hickory nut. His arms and legs are by no means free of them; yet they are not so numerous on his extremities as upon his trunk and head and

neck. One had located itself in his upper eye-lid on left side. Forty-five years ago, his family physician had attempted to remove it, but failed. He came to Baltimore and sought the advice of a surgeon, who cut into it, from the inner face of the lid, but as the hæmorrhage was excessive, did not continue the operation of removal. From this time until a few months since the growth had been so slow that it did not exceed the size of a walnut in its hull. Twenty years ago, this left eye sloughed from inflammation, and now exists as a stump in the socket. About four months since the tumor took on a rapid growth, and seems to him to be increasing daily. When Dr. Chisolm first saw the case, the tumor was the size of the fist, oval in shape, hanging downwards apparently from the eye-brow to the angle of the mouth. It was red in color, not tense, and could be shaken from side to side, showing a pediculated form. By lifting it, Dr. Chisolm expected to expose perfect eye-lids, when to his surprise, the tumor seemed to divide itself into two unequal parts, separated by the lid fissure, which had increased to measure three inches from canthus to canthus. The gaping of the lid opening showed a hypertrophied conjunctiva very thick and vascular, lining the enlarged pouch, in the bottom of which the atrophied eye-ball could be felt. The hypertrophied upper lid formed three-quarters of the mass. Notwithstanding the lower eye-lid was twenty times its normal dimensions, the tumor was recognized as belonging to the cavernous varieties of fibroma, and the patient informed of the danger of amputation from hæmorrhage. He desired it removed at all hazards, and chloroform was administered. The extirpation was made with the scissors. The first incision ran through the thickness of the lower lid, leaving the inner and least changed part *in situ*. The first clip gave vent to free hæmorrhage, which could only be controlled by a suture clamping the skin and mucous membrane together. The entire tumor was in this way removed—the hollow socket around which the lid-tumors had developed permitting of this kind of manipulation. After each clip of the scissors, a suture was applied to suppress the hæmorrhage, until all the mass was removed. The remnant of the upper and lower eye-lids were then stretched over the cavity and sewed in position—some of the former sutures being removed to allow the lids to be properly adjusted. The case as now seen, presents an excellent appearance; very little swelling has occurred, and no hæmorrhage since the operation. Owing to the succession of small scissor-cuts, and the immediate application

of the clamping suture, made by the introduction of very fine needles, the sutures being put very close together, not over one pint of blood was lost during the operation, which lasted one hour. No after-dressing was used, the wound being left exposed to the air for the making of a blood scab along the line of sutures. Dr. Chisolm adopts this method in the treatment of all eye-lid wounds, believing it much better than water dressings.

Eclampsia—Its Treatment by Morphia.—Dr. S. C. Chew reported a case of eclampsia which recovered under the following circumstances: A lady, who had previously borne children without difficulty, again came under his observation when seven months pregnant. She had just returned from her summer pleasure tour, and referred to her general health as perfect. He was shocked at her general anasarca condition, with immensely puffed ankles; and upon examining the urine, found it loaded with albumen and tube casts. She was put upon bitartrate of potash, which caused copious watery evacuations, but no marked reduction of the swelling. One week since, labor set in with vertex presentation in the normal position. The labia were so œdematous that he found much difficulty in reaching the os to make out the variety of presentation. Labor progressed slowly, and the os dilated very tardily. He was sitting by the bed talking to his patient, when suddenly she remarked that she could see nothing, although she had both eyes open, and very soon afterwards the face became distorted and the body convulsed. Expecting this, he had provided himself with chloroform, which was at once administered. Under its influence he examined the os and found it dilating very rapidly. He tried to deliver by the long forceps—introduced the blades but could not get them to lock on account of the œdema of the parts. As the effects of chloroform passed off, a second fit occurred, and chloroform was again used. Labor now progressed rapidly, and in an hour from the first convulsive act the child was born without instrumental aid.

Dr. W. T. Howard had been sent for and arrived at this juncture. Dr. Chew had opened a vein in the arm, but could not get any blood. Under consultation, it was now determined to give her a hypodermic injection of morphia, notwithstanding that in the intervals from chloroform narcosis, she exhibited continuous stupor. The first injection had an evident effect in prolonging the interval between the convulsive paroxysms. Although the patient had lost over a pint of blood by the labor, Dr. Chew thought it expedient to take away twelve

ounces more by cupping the spine over the kidney region. In two hours time a second morphia injection was administered, and every exhibition of a convulsive effort was met by the administration of chloroform. A third morphia injection was given, of one-quarter grain, making three injections in five hours. After the last, there were no more convulsive fits, although it was some hours before all tendency to muscular twitching passed off. The lady is now, at the end of six days, out of danger. The amniotic discharge after the delivery of the child was long-continued and excessive. The kidneys have also been acting freely, and all the dropsical fluid has disappeared from the body.

In this case, Dr. Chew desired to call special attention to the efficacy of hypodermics of morphia and blood letting—one to quiet nervous irritation, and the other to relieve the kidney suppression. Specimens of urine were exhibited—one drawn off by catheter when the first convulsive paroxysm came on. This specimen was dark, with blood corpuscles, and full of albumen and tube casts. A second specimen drawn after the cupping, although full of albumen and casts, was clear and free from blood. The specimen of this morning was in every way normal urine, free from casts and albumen.

Dr. H. P. C. Wilson endorsed fully the opinion just given of the judicious course pursued by Dr. Chew. He had a case of a young married lady who did not consult him until he was called to her in labor pains. Up to this moment, she had had no trouble. Delivery was speedy and safe. He left her, as he thought, in a most excellent condition, to look after other patients. On returning to his office, he found he had been sent for. When he arrived, after some hour's interval, several doctors were in attendance. Chloroform had been freely used, with the effect of only temporarily controlling the convulsive attacks, of which she had a great many. Finding the chloroform inhalation not being effectual, he gave a hypodermic injection of one-third grain of morphia. With its introduction, ended the convulsive paroxysms, and the case recovered. Dr. Wilson's experience led him to put much confidence in the administration of morphia.

Dr. A. Arnold could not see, from a physiological standpoint, how morphia could be useful in cases in which convulsions were induced by kidney suppression. He believed that opium would diminish secretions, and that in this special case the kidneys would be aided in eliminating the blood poison. Blood-letting he had always favored, even when it

was not fashionable to do so: but he would be very loth to use morphia, with his present views of its action, by diminishing secretions.

Dr. P. C. Williams saw no physiological cause for abstaining from morphia. He did not believe that the convulsions were induced solely from want of kidney action. If so, why did not convulsions come on during the many weeks of swelling and albuminuria prior to the opening of labor? He thought that, on the contrary, the convulsive act was a nervous irritation brought on reflectively from uterine action; and while all agreed that the uterus should be emptied as speedily as possible, so as to take away one of the causes of irritation, and also, possibly, pressure upon the kidneys, that morphia was the peculiar remedy to allay this reflex brain irritation. He would not debar himself the marked advantages which hypodermic injection of morphia offers, notwithstanding the physiological doubts which may exist concerning its action.

Morphia for Catarrh.—Dr. J. J. Chisolm stated that he had found morphia a sovereign remedy in incipient catarrh. In his own person, morphia would cut short promptly the cold, but would act as a powerful diuretic.

Chloral Hydrate in Uræmic Convulsions.—Dr. E. Cordell related his experience in a recent case of uræmic convulsions coming on in the last month of pregnancy. He had brought this case successfully through by the liberal use of hydrate of chloral by enemata, frequently repeated. Its action in controlling the spasms was very satisfactory, although these paroxysms continued over a greater period than in the case reported as relieved by morphia.

Typho-Malarial Fever.—Dr. R. McSherry desired to know from the members of the Academy their experiences in, to him, a new form of fever, of which he had seen several cases within the last few months. The fever he would call, for want of a better name, typho-malarial. Its long continuance gave it clearly its title to typho, while its paroxysmal nature may be explained by some malarial cause. Quinine, however, could not stop these pyrexias—only temporarily controlling them. The marked peculiarity of this, to him, new fever, was exhibited in the irrelevant condition of the pulse and temperature. He exhibited a characteristic chart of a case, now convalescent, in the person of a gentleman, 21 years of age. The temperature ranged from 103° to 105° F., and the pulse from 80 to 90 beats. In one of his cases in which recovery took place, the temperature reached 107° , the pulse

never having been frequent. In a third, the temperature reached 109°. This case terminated fatally. It was a peculiar fever, with evident malarial complication, which quinine would not break up.

Dr. J. Morris read the paper of the evening on "Ergot: Its Uses and Abuses." This subject was so full of interest that the discussion of it was deferred to the next meeting.

Book Notices, &c.

Publishers and Authors having complimentary copies of their publications for distribution, are invited to contribute such as they can spare to the library of the Richmond Academy of Medicine, where they will be brought to the attention of a large body of influential medical men. Dr. E. T. Robinson, Richmond, Va., Librarian, etc.

The National Dispensatory, Containing the Natural History, Chemistry, Pharmacy, Actions and Uses of Medicines, Including those Recognized in the Pharmacopœias of the United States, Great Britain and Germany, with Numerous References to the French Codex. By ALFRED STILLÉ, M. D., LL. D., Professor of the Theory and Practice of Medicine, and of Clinical Medicine in the University of Pennsylvania, etc.; and JOHN M. MAISCH, Phar. D., Professor of Materia Medica and Botany in the Philadelphia College of Pharmacy, etc. Second Edition. Thoroughly Revised, with Numerous Additions, and 239 Illustrations. Philadelphia: Henry C. Lea, 1879. 8vo. Pp. 1680—xi. Price, Extra Cloth, \$6.75; Leather, with raised bands, \$7.50. (For sale by Messrs. West, Johnston & Co., Richmond.)

The remarkable industry manifested by the authors and publisher in so quickly issuing an enlarged and greatly revised edition of this immense work, is worthy of record. Only three months ago did we have noticed, soon after its issue, the first edition. That notice, by Prof. Wellford and Mr. Willis, was so thorough and so recent, that it is not necessary to do more than to announce the publication of this second edition. It is proper to remark that nearly every one of the special criticisms made in our first notice has been recognized by the authors as just, and hence great modifications have been made in the sections then particularly alluded to. Still the criticism in general still remains, that Dr. Stillé has made too prominent, in many instances, his individual views, instead of recording the observations and experience of competent writers. Such a book as a *Dispensatory* is not intended for

the record of the opinions of the author as opposed to other authorities; it better serves its purpose when it simply records, as does Wood & Bache's *Dispensatory*, the experience of practitioners. We state what we believe to be a common wish of the profession of the country in urging the medical authors especially, in preparing future editions, to record more of the experience of physicians, and to withdraw or further modify some of his too dogmatic assertions of simply personal convictions. In Dr. Stillé's invaluable double volume work on *Therapeutics and Materia*, he, of course, should take the liberty of urging his views; and these views, of course, have their weight when thus given. In fact, his work on *Therapeutics*, etc., has had a controlling advisory influence. But in a *Dispensatory*, something more than personal views are looked for and desired.

The publication of Prof. Maisch's labors, in his department of the *National Dispensatory*, still remains the peer of anything yet published on the subject, and this will cause the work to be adopted throughout the entire country, by druggists, apothecaries, etc.

The Heart and its Diseases, with their Treatment, including the Gouty Heart. By J. MILNER FOTHERGILL, M. D., F. R. C. P., Lond., Assistant Physician to the West London Hospital, and to the City of London Hospital, for Diseases of the Chest, etc. Second Edition (Entirely Re-written), with Illustrations. Philadelphia: Lindsay & Blakiston, 1879. 8vo. Pp. 476. Cloth. Price \$3.50. (For sale by Messrs. West, Johnston & Co., Richmond.)

As have been all the former publications of Dr. Fothergill, the one now before us has a special attraction for the physician. It is scientific in its descriptions, rational in its suggestions, practical in its recommendations. While we cannot claim that there are many entirely new statements, either as to pathology, diagnosis or treatment, still the credit must be awarded Dr. Fothergill of having presented the profession, in this volume, a most interesting account of pretty much all that is known regarding heart diseases. Especially do we wish that every one would read and benefit by the chapter—some 40 pages in length—on “the treatment of organic disease of the heart.” It is an epitome of all the preceding 273 pages.

After this chapter comes one on diseases connected with the pericardium. Then follows a valuable chapter on the neurosal heart troubles. A separate chapter of over 60 pages is devoted to the “gouty heart”—a subject too much neg-

lected in most books on heart diseases, and hence a condition too frequently overlooked by physicians in their diagnoses.

We cannot convey in so brief a notice a proper conception of the value of this work. It should be studied by each practitioner in order that he may derive from it that instruction which will be of every-day service to his patients.

Of course, we may add, the usual statement that there are some omissions of reference to subjects which we would have been glad to have seen considered in a work of this kind. For instance, the ante-mortem diagnosis and treatment of heart clot—a subject which has justly gained some prominence in America, by the accurate diagnoses in several instances by Dr. M. L. James, of this city, and whose paper was published in the *Transactions of the Medical Society of Virginia*, for 1877.

Clinical Lectures of Diseases Peculiar to Women. By LOMBE ATTHILL, M. D., Master of the Rotunda Hospital, Dublin, etc. Fifth Edition, Revised and Enlarged, with Illustrations. Philadelphia: Lindsay & Blakiston, 1879. 12mo. Pp. 342. Price \$2.25. (From Publishers.)

Without being able in our limited space even to give the table of contents, etc., so as to show the scope of the work, we must condense an expression of our opinion into one sentence. Without being faultless, it is the best small handbook for the general practitioner that we know, and has an excellent index.

Transactions of the College of Physicians of Philadelphia. Third Series. Vol. IV. Philadelphia, 1879. W. S. W. RUSCHENBERGER, M. D., President; J. EWING MEARS, M. D., Recorder. 8vo. Pp. 250—lxxviii. (For sale by Messrs. Lindsay & Blakiston. Philadelphia, Pa.)

This volume is, as have been all of its predecessors, a most valuable addition to medical literature. The nature of the organization itself makes all of its members authorities—many of whom enjoy reputations not confined to America.

The first sixty pages are devoted to able memoirs of Drs. John Rodman Paul, Joseph Carson and John Barclay Biddle.

The first paper after the “memoirs” is one by Prof. John Tyson, M. D., reporting a “case of spinal paralysis, probably due to so-called spinal exhaustion.” The patient was a young man, of vigorous appearance, etc., but whose condition seems attributable to sexual excesses. The restorative plan of treat-

ment was followed by recovery; but so slowly that it may be questioned whether or not the result was due to medicine given.

Dr. J. Ewing Mears reports a "case of gun-shot wound of the abdomen, perforating the ascending colon," which resulted in recovery.

Dr. W. W. Keen presented a paper on "medical missionary work, with some notes on the condition of medicine in Japan," which paper enchains the attention of the reader until every line is perused.

Dr. John M. Keating gives a "case of ulcerative endocarditis with pyæmia; death from perforation of the heart." The lesson learned from this case is, that *primary* abscess of the heart, independent of general myocarditis, is occasionally found.

Dr. John H. Packard mentions a case of "accidental entrance of a centipede into the nostril, and retention of it for several days."

Then follows a most valuable "Report of the Committee on Meteorology and Epidemics for the year 1877, including a notice of the Increasing Frequency of Deaths from Cancer," by Dr. Richard A. Cleemann. This report is especially valuable to sanitarians.

Dr. Wm. H. Porter records a "case of rapid post-mortem emphysema." In less than eight hours after death, it was necessary to open the body to prevent it from bursting.

Dr. Wm. V. Keating gives a graphic description of an "endemic of typhoid fever from defective drainage."

Dr. Louis Starr read a report of several "cases of hepatic abscess, with remarks upon the varieties, etiology and diagnosis of the disease." During the discussion of this paper, Dr. George H. Horn also reported a "case of hepatic abscess."

Dr. Addinell Hewson reported a "case of immense (fibrocystic) abdominal tumor," etc. The case ended fatally.

Dr. George Hamilton read a paper "on the relation of sewer gas to typhoid fever."

Dr. Wm. S. Forbes read the report of a "case of un-united fracture of the tibia of twelve years' standing; preservation of a useful limb," and exhibited the patient.

Dr. Addinell Hewson read reports of some cases illustrating "the value of Teale's method of forced dilatation of the sphincter vesicæ in incontinence and excessive irritability of the female bladder."

Dr. Isaac Ray read a suggestive and otherwise valuable paper on "recoveries from mental disease."

Dr. Robert P. Harris reported, on behalf of Dr. John L. Atlee, of Lancaster, Pa., a "remarkable case of congenital ventral gestation, the subject being a girl six years old, who recovered after the discharge of the fetal mass from her abdomen, and lived seventeen years."

It is a source of great regret that we cannot notice at greater length some of the papers in this most excellent volume.

The Grounds of a Homœopath's Faith. By SAMUEL A. JONES, Professor of Materia Medica, Therapeutics and Experimental Pathogenesis in the Homœopathic Medical College of the University of Michigan, etc. Boericke & Tafel, New York and Philadelphia, 1880. 12mo. Pp. 92. Flexible cover. (From Publishers.)

This little book contains three lectures delivered at the request of matriculates of the Department of Medicine and Surgery (Old School) of the University of Michigan. To attempt a notice would be to discuss homœopathy itself, for which discussion, from our stand-point, there is no occasion at present in the South, where there are so few who countenance homœopathy as a school of practice. The arguments Dr. Jones tries to array in defense of homœopathy as opposed to the regular school, are about the size and weight of one of the pellets he may be in the habit of administering in certain cases of disease.

A Text-Book on Physiology. By J. FULTON, M. D., M. R. C. S. Eng., L. R. C. P., Lond. Professor of Physiology and Sanitary Science in Trinity Medical College, Toronto, etc. Second Edition, Revised and Enlarged, with Numerous Illustrations. Philadelphia. Lindsay & Blakiston, Toronto: Willing & Williamson, 1879. 8vo. Pp. 416. (From Philadelphia Publishers.)

This is a capital book, fulfilling admirably the design of the author and the needs of the Professor of Physiology and his class-students. It does not enter into elaborate discussions of doubtful facts; nor is the text encumbered by the long lists of foot-note references and notes, which tend rather to confuse the college student than to benefit him. But claiming in his preface the rights of general compiler, he records in direct assertions the known or generally believed functions of the various organs of the body. Such a work, while it thoroughly instructs the student, at the same time allows the professor ample opportunities to supplement the text, or to bring out facts and arguments and experiments regarding disputed points.

The work has another attraction which is seldom seen in text-books on physiology; and this consists in various practical suggestions in connection with the description of the several organs and their functions. These suggestions cannot fail to be appreciated by those who adopt the book for their use; while they also serve to keep up the interest of the student, which is so frequently wanting in physiological books and lectures.

This book is, perhaps, not generally known to the profession of the United States. Hence, believing as we do, that it serves the wants of most general practitioners, and that it is an excellent text-book for the college student, we most cordially recommend it.

Spermatorrhœa—its Causes, Symptoms, Results and Treatment. By ROBERTS BARTHOLOW, M. D., Professor of Theory and Practice of Medicine, and of Clinical Medicine in the Medical College of Ohio, etc. Fourth Edition, Revised. New York: Wm. Wood & Co. 1879. 8vo. Pp. 128. (From Publisher.)

This is an excellent monograph, treating of a condition about which physicians are frequently consulted, and about which they sometimes manifest almost as much lack of information as the patients who apply for relief. One great fault has been the limited amount of literature on the subject emanating from recognized professional authority. The work before us now fills an important gap. Being the fourth edition, it is a thorough revision of all former issues of the book.

Editorial.

Treatment of Chronic Diseases by the "Salisbury Method." Dr. Ephraim Cutter, having perfected facilities for the treatment of twenty-five patients on the "Salisbury plan," at a place near Hotel Wellesley, Ridge Hills, fifteen miles from Boston, Mass., on the Woonsocket Division, B. & A. R. R., solicits the patronage of the profession. Physicians sending chronic cases, will constitute a committee to whom he will report results after an experience of six months. Massage, nursing, etc., will be supplied. Dr. Cutter hopes to report the results of his observations to the American Medical Association in June, 1880. He has tried the "Salisbury plan"

in a number of cases—especially of consumption—and has found it successful beyond anything he has ever tried or heard of, and now wishes to test it on a larger scale.

We take advantage of the opportunity here offered to remark, for the special benefit of those whose articles on consumption have been coming in for publication, opposing Dr. Salisbury's treatment, as advised in his article in our September No., 1879, that we have have felt it a duty to respectfully decline publishing them for the present. We were as little prepared to hear the statements of such wonderful success as were any of the readers of Dr. Salisbury's article. But with the established reputation of the author, and his vast opportunities and clinical experience, and from the confirmatory evidence obtained by letters from other sources, we are forced to the conclusion that there is a practical value in the recommendations he has made. Not one of the articles recently sent us for publication, criticizing Dr. Salisbury's paper, records any experience or observation whatever, on the part of the writers, regarding the "Salisbury method" of treatment. Has not a practitioner of such generally accredited ability and great experience, in making an announcement so surprising as his, the right simply to ask an abeyance of criticism until his recommendations may have been tested—not in part or in a half-way manner—but to the very letter? *Generally*, it is attention or inattention to the apparently little details that becomes the element of success or the cause of failure. This statement is well sustained by reference to the application of Sayre's plaster-jacket in cases of spinal deformity. Some, even to this day, who have but imperfectly tested "Sayre's treatment," deny the value of the grand discovery, simply because their failures to derive benefit have been chiefly due to improper attention to the *little* details that Dr. Sayre has so strongly emphasized as essential to success. So it may be in regard to the method of treatment recommended by Dr. Salisbury. It would be unfair to the cause of medical science, and unjust to Dr. Salisbury, for any to attempt to test the practical value of his plan unless his directions are followed to the letter.

The American Public Health Association.—We take occasion to remind our readers who are members of the American Public Health Association, or who desire to become such, that the next annual meeting will be held in the city of Nashville, Tenn., beginning on the 18th of this month. The meeting will, it is believed, be one of unusual interest. The

main subject of discussion, as originally selected by the Executive Committee, will be *City Sanitation*, with especial reference to water supply; drainage and sewerage; disposal of garbage and excreta; slaughter-houses and abattoirs; public school buildings; public health laws, regulations, etc.; expenses of municipal sanitation.

More recently, the Executive Committee has decided to supplement this discussion by one on the practical questions connected with the management of an actual or threatened outbreak of yellow fever, under the following heads:

1. How to deal with a city in the yellow-fever zone in order to prevent the appearance of a first case.

2. How to prevent the importation of a first case.

3. How to deal with a first case, and early cases generally, when, in spite of precautions under first and second headings, it has made its appearance.

4. The duty of local boards of health, or other health authorities, to report such cases promptly, even though there may be some doubt as to the diagnosis. Whether the knowledge that such reports would be faithfully made, would not have a tendency to allay apprehensions and give confidence to other communities, while warning them of the importance of making preparations for contingencies.

5. Under what circumstances may it become necessary or expedient to remove the unacclimated portion of the population from an infected place? How may this be effected for the poorer classes of the population, and how should the people thus removed be cared for and supported?

6. Measures for isolating a dangerously-infected place.

7. Organizations for the relief and treatment of the sick in an infected city.

8. Measures for preventing the spread of the disease from an infected place by railroads, including the management of transfer stations.

9. Inspection of steamboats at an infected place and at intermediate stations between the port of departure and their final destination. Should stations of observation be established by the National Board of Health? If so, what should be their relations to the health authorities of the States within whose territorial limits they may be established?

10. Results of the co-operation and aid given by the National Board of Health to State and municipal boards under the provisions of the act approved June 2, 1879. What suggestions may be made to render this system more efficient?

The Tenth Annual Session of the Medical Society of Virginia, held in Alexandria, October 21st, 22d. and 23d, 1879, must be generally recognized as fully equal in importance and interest to any session ever convened, although the attendance was smaller than usual—which may be accounted for by remembering the geographical position of Alexandria, affording no Virginia territory East or North from which to draw. But the Society was honored by the presence of two of the ex-Presidents of the American Medical Association—Drs. J. Marion Sims and J. M. Toner—and also by the visit of Dr. H. P. C. Wilson, of Baltimore, each of whom contributed papers or remarks of great interest to the Society, which will appear in the forthcoming volume of *Transactions*. Besides, Dr. Murray was present as a delegate from the Florida Medical Association. A number of valuable reports and volunteer papers were contributed by the Fellows, which would do credit to any selection of practitioners in the United States. But as these papers have mostly been ordered to be published in the forthcoming volume of *Transactions* (to be issued, as heretofore, in connection with the January number, 1880, of the *Virginia Medical Monthly*—copy for which is now in the hands of the printers), we will not now undertake to give synopses.

Dr. Henry Latham, of Lynchburg—one of the few remaining original members of the Society—is President-elect. The next session of the Society will be held in Danville, Va., during the autumn of 1880.

It is a source of pleasure, also, to announce that the Society—after having labored for several years under an annually increasing indebtedness—was this year, by special effort, entirely relieved; so that the Society this year again starts with a clear balance sheet.

A matter of considerable interest to many practitioners of the State may be here referred to. A committee was duly appointed to inquire into the expediency, and if found favorable, to report at the next annual session, upon a plan for organizing within the Society a sort of Mutual Aid Society. If this organization is completed, it will result in pecuniary benefit to the families of the future deceased Fellows. The committee, of which Dr. Frederick Horner, of Salem-Fauquier, Va., is chairman, is open to suggestions coming from any quarter.

The local Faculty of Alexandria will long be remembered with thanks because of their constant and individual attention to the comfort and pleasure of each visitor to the So-

ciety. Their private entertainments were numerous, handsome and sumptuous. A new zeal seems to have been kindled throughout the entire professional ranks of the north-eastern section of the State by the brilliant and useful meeting in Alexandria. Long may it continue for the unity of feeling and general good of the profession of Virginia!

Washington Training School for Nurses.—The opening of the Second Session of this school on October 27th, 1879, was a brilliant occasion, presided over by Dr. J. M. Toner, of Washington, D. C., who has done so much for the good of humanity and the advancement of medical education. Dr. Joseph Taber Johnson delivered an excellent address advocating the better education of nurses for the care of the sick in hospitals and private practice. In almost every community there is demand for *educated* nurses, male and female. Let those interested, or who are looking out for work to do, direct their attention to this subject.

Emulsion of Cod Liver Oil with the Hypophosphites.—Messrs. Purcell, Ladd & Co., of this city, have been, for some time past, preparing an emulsion of cod liver oil with the hypophosphites of lime and soda. As a perfect and reliable preparation, it will commend itself to the notice of the profession, whilst, at the same time, it presents these valuable remedial agents in a most eligible form for administration. This "emulsion" is prepared from the best and purest cod liver oil, selected with special reference to this preparation. It is needless to speak of Messrs. Purcell, Ladd & Co., so long and favorably known to the profession; they are skilled pharmacists, and their name is a guarantee for the entire reliability of their preparations.

Messrs. Purcell, Ladd & Co. put up this emulsion at 50c. per bottle—this smaller size being convenient and popular, preserving the freshness and sweetness of the oil till used.

Obituary Record.

Dr. Marcellus P. Christian, one of the truest of honorable men, a physician of marked ability, and a professional man devoted to the elevation of the standard for the practice of medicine, an earnest worker in the Medical Society of Vir-

ginia, and one of the warmest friends we ever had, died at his home in Lynchburg, Va., November 2d, 1879—aged about 45 years. His fatal illness (of only six days duration) was pneumonia, of which disease this was the sixth attack during his life.

At a meeting of the Lynchburg Medical Faculty on Nov. 3d, 1879, in the office of Dr. D. A. Langhorne, the following preamble and resolutions were unanimously adopted:

Whereas, Our friend and associate, Dr. Marcellus P. Christian, after a long and active career of usefulness in his profession has been removed from our midst by death, to our great and heartfelt sorrow; be it

Resolved, That in this dispensation of the Divine will, we feel most keenly the stroke which has deprived us of the counsel, companionship and assistance of one whose many excellent qualities of mind and heart had endeared him, not only to his professional brethren, but to the community at large.

Resolved, That during his professional career, in which he attained an enviable reputation as a skillful and successful physician, his honorable conduct and great moral worth, his humane and sympathetic deportment, ennobled the profession of which he was an honored member.

Resolved, That we unite in offering to the bereaved daughter and kindred of our late brother the assurance of our deep sympathy, not in the hope that we can lighten the burden of their grief, but as an expression of our claim to share their sorrow, as sincerely as we mourn the loss of him who was dear to us as a devoted friend, and known to all as a true man in the fullest meaning of the word.

Resolved, That a copy of these resolutions be sent to the family of the deceased, and also furnished the *Virginia Medical Monthly* and the city papers for publication.

Resolved, That as a mark of respect to our late brother, we will attend his funeral in a body.

R. S. Payne, M. D., Chmn.; Benj. Blackford, M. D., Secy.

Died, October 14th, of angina pectoris, Adele, daughter of J. J. Caldwell, M. D., of Baltimore, Md., aged seven years.

Rev. Geo. B. Perry, M. D., D. D., LL. D., died at his home in Hopkinsville, Ky., September 30th, 1879, in his seventy-ninth year. He was late rector of Grace Episcopal Church in that city. He received his degree of M. D., from Jefferson Medical College, and practised for several years.

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Original Communications.

ART. I.—**Some Phases of Cerebral Syphilis.** By I. EDMONDSON ATKINSON, M. D., Clinical Professor of Dermatology, University of Maryland, Baltimore, M. D. (Read before the Baltimore Clinical Society, October 17th, 1879.)

I have been led to report the following examples of cerebral disease of syphilitic origin, not because they present characters marking them as unusual or specially worthy of notice, but rather because they afford a valid excuse for bringing before this Society this evening a subject which has, of late years, attracted considerable attention. I trust that no further apology is needed for relating and commenting upon cases, whose symptoms are usually considered as belonging to conditions of most hopeless and fatal significance, and which (their essential nature remaining unrecognized) would most probably result in irremediable disaster to both body and mind. It must, then, surely be profitable to keep constantly in mind the frequency with which syphilis attacks the intra-cranial regions; the almost constant tendency for its lesions (when left untreated) to end in imbecility and death; and, finally, the promptitude with which these lesions may often be relieved, and sometimes cured, by appropriate treatment. It is, therefore, of the greatest importance for us to learn to discriminate between these symptoms

of cerebral disease due to syphilis and those due to other causes; and although it is universally admitted that there is not a single symptom of brain disease that syphilis can claim as its exclusive property, there are, nevertheless, often such associations of signs and peculiarities of their combinations that we are enabled to arrive, in very many cases, at correct conclusions.

CASE I.—John P., aged 28, apparently of white descent, but really with a slight admixture of negro blood, applied at the Special Dispensary January 6, 1876, for treatment. One was immediately struck by his peculiar earthy pallor, his dazed expression, and his slow, monotonous and dreamy articulation, corresponding to the general sluggishness of his cerebration. He gave the following history:

In 1866, while employed upon a Mississippi steamboat, he had a chancre. This was succeeded by cutaneous eruptions and certain other symptoms, the nature of which he does not remember. Five years ago (in 1871), he "lost the use of his limbs, and could move nothing but his head." This condition lasted one month, and then disappeared rapidly under treatment. Again, in 1872, he was paralyzed. (His memory does not enable him to recall his exact condition upon these occasions, and, I think, is not to be trusted, beyond the simple recollection of having been paralyzed.) After his recovery from the second attack, he remained well, with the exception of certain cutaneous eruptions, until the supervention of fits, limited to the right side, and principally to the right arm two years ago, *followed* by loss of consciousness. At first, these fits recurred every fifteen days, but were now less frequent. During the five years preceding the date of my acquaintance with him, he had been subject to dreadful headache, which always began at the right parietal protuberance, but which was also of great intensity over the left parietal region. His condition on January 6, 1876, was noted as follows: There remained no trace of paralysis; his general health was very much reduced; his complexion and expression were markedly cachectic; he seemed bewildered, dazed, as though half awake. His speech was slow, drawling and monotonous, although his answers were to the point. There were no cutaneous eruptions. His thoracic organs were healthy, and, indeed, no symptoms of disease other than those about to be mentioned, were observed. He reported a notable decrease in sexual power. He had been suffering of late with atrocious headache, which had grown steadily worse,

in spite of an electrical treatment to which he had been subjected. There was a very perceptible enlargement at that part of the right parietal bone, where the pain always began (just in front of the parietal eminence), and this region was very tender on pressure. Upon the left side of the head, where the pain was nearly as intense, there was no enlargement nor tenderness. A mixture of potassium iodide (grs. 5) and of iodine (grs. $\frac{1}{10}$) was given thrice daily, and immediate improvement was the result. His attendance was, however, very irregular.

His wife came with him (Aug. 5), and reported that he had recently had a return of the fits, and that his bad symptoms recurred as soon as he neglected his treatment. He now declared that the fits were preceded by an unpleasant taste, which sometimes would appear some hours before the paroxysm. At this time, he would feel dejected, and as if he had committed a crime. The convulsions would next begin, *without a premonitory cry*, with a twitching of the right arm, which would continue for some minutes before he would lose consciousness. Sometimes he would remain conscious throughout. He never bit his tongue. After the seizure, the extremity would feel benumbed and heavy. Sometimes the fit would be preceded or replaced by mental disorder of a decided character. He would become bewildered, and would act strangely. Upon one occasion, he threw away, one at a time, a number of bank bills belonging to his employer. Upon this occasion, his movements were observed, and the notes recovered by those watching him. His urine was faintly albuminous, and contained a few hyaline and faintly granular casts. He professed never to have had dropsy; but upon one occasion, he stated, his shoes were worn with difficulty; he attributed this, however, to long-continued erect posture, in consequence of his occupation (at the time) as waiter in a saloon. He had a series of convulsions on Dec. 27th, 1876, which were not confined this time to his right arm.

This patient continues under observation from time to time. He suffers often from headache, which at times is frightful, and occasionally from fits. His symptoms always yield to mercury and potassium iodide, though it has sometimes been necessary to increase the dose of the latter to 30 grains thrice daily. His attendance has been too irregular to justify any hopes of a permanent cure. His urine I have frequently examined, and have always found a small amount of albumen and hyaline and finely granular tube casts in it.

Upon a single occasion, I noticed that he was puffy about the eyes. His sight remains good, and has been kindly tested by my friend, Dr. Samuel Theobald, who has given me the following data of his vision :

"Left eye sees $\frac{20}{xxx}$; right eye sees $\frac{20}{xxx}$. $\left. \begin{array}{l} \text{Right} \\ \text{Left} \end{array} \right\} = \frac{20}{xx}$

That is, vision in both eyes is normal. Vision of left eye is slightly improved, $\frac{20}{xx}$ by $\frac{1}{48}$. Right not improved by glasses. Left reads Jäger No. 1 promptly ; right less promptly. Pupils less active than normal, not dilating sufficiently when shaded."

I have selected the foregoing case as one fairly representing that form of epilepsy in which syphilis may be recognized as the causative influence—not to say, however, that the epilepsy of syphilis offers a single symptom that may not as well be met in the non-syphilitic varieties. On the contrary, it is only by the sum of the symptoms that one is enabled to distinguish essential epilepsy from symptomatic epilepsy in general ; while, to decide between the various forms of the latter due to injury, tubercle, non-syphilitic growths, etc., and that due to syphilis, one must have recourse to the history, the general condition of the patient, and to the results of treatment in the given case. While, however, we may not diagnosticate, with certainty, epilepsy as due to syphilis, in the absence of a definite syphilitic history, and the information to be supplied by treatment, it is, nevertheless, possible to arrive frequently at a pretty accurate conclusion after careful consideration of all the signs.

In the first place, it has been noted that, in syphilitic epilepsy, the convulsions first occur at an age at which essential epilepsy begins, but very rarely in adult life, when men and women are most exposed to syphilitic disorders. Again, it has noted, that pain and headache of severe, agonizing character, are apt to precede the convulsive attack by hours, days, weeks, instead of succeeding it in a more or less mild form, as in essential epilepsy, and that this headache is frequently limited to or radiates from a fixed location ; and that not seldom the skull is tender to pressure over that point. It has been further observed, that syphilitic epilepsy is very, *very* often only partial—that it is limited to one side, to one ex-

tremity. Hughlings Jackson, indeed, has declared that optic neuritis, along with convulsions, beginning unilaterally, most frequently in the hand, and especially in the two first fingers, form an association of symptoms usually implying syphilitic disease. This statement is agreed to by Dr. Buzard (*Clinical Aspects of Syphilitic Nervous Affections*, Am. Ed., p. 16).

Fournier says: "A partial epilepsy will almost certainly attest a limited lesion of the cortical motor zone, or, at least, of the parts immediately contiguous to that zone" (*La Syphilis Cerebrale*, p. 211).

This region corresponds to the upper and lower antero-parietal areas of Ferrier, which, with a portion of the postero-parietal lobule, "contain all the motor centres of the limbs, facial muscles and mouth" (*The Functions of the Brain*, New York, 1876, p. 313). According to Fournier, syphilitic epilepsy usually attacks an upper extremity, and always involves, in any given case, the same parts.

All writers have observed that partial syphilitic epilepsy goes through its phases, usually, without destroying the consciousness of the patient, or, at least, only destroying it partially, or after the convulsions have been sometimes present. Finally, it frequently happens that the initial cry is absent. So much, then, for the partial epilepsy of the syphilitic.

Considering next the intervals between the attacks, one finds it possible to recognize again differences between essential and syphilitic epilepsy. (Broadbent, *Lancet*, 1874, vol. 1; Fournier, *op. cit.*, p. 220.) The true epileptic during the interval is apparently well, and only experiences marked deterioration of his general health of mind and body after the disease has lasted long. On the other hand, the syphilitic epileptic, even at the beginning of his seizures, may be profoundly affected in general health, and, invariably, soon shows most decided evidence of cerebral and general disease.

Let it not be forgotten, however, that while the foregoing considerations enable us frequently to advance far towards the diagnosis of syphilitic epilepsy, and certainly make obvious the differences between epilepsy that is essential or simple, and the epilepsy that is symptomatic, they do not

supply us with evidence which, of itself, points with certainty to a *syphilitic* origin of epilepsy. Fournier, indeed, points out three characteristics belonging, *more especially*, to syphilitic epilepsy (*op. cit.*, p. 226). These are—1st, The late age at which the symptoms originate; 2d, Partial seizures with the preservation of consciousness; 3d, The early combination of other cerebral manifestations with the epileptic phenomena. (Consult article by Schüster on ‘Syphilitic Epilepsy,’ *Vierteljahr. f. Derm. u. Syph.*, 1876, p. 350.)

The diagnosis, then, between essential and symptomatic epilepsy, can often be definitely made; but before a given case of the latter form can positively be pronounced syphilitic, one must be able to discover, associated with the epileptic condition, a clearly-defined history of syphilis, or, better still, the actual presence of other manifestations of the disease, or the diagnosis must often be held in reserve until the results of treatment can be ascertained. It must not be forgotten, however, that symptomatic epilepsy, due to tumors (non-syphilitic), abscess, etc., may exist in a syphilitic subject—a complication, indeed, not apt to occur. It will always be necessary, moreover, to guard against mistaking some of the manifestations of hysteria for syphilitic brain disease, which may be perfectly simulated (Wunderlich *N. Syd. Soc. Trans.*, *German Clinical Lectures*, 2d series, p. 401).

To turn now, for a moment, to my patient: A comparison of the history of the affection with what has just preceded, will instantly draw attention to the close correspondence of his symptoms with those most characteristic of syphilitic epilepsy. Two years after the initial lesion, he had a paralytic attack. At the end of another year, he had a similar seizure. The real nature of these attacks is not apparent, but from the asserted extent of the paralysis with the rapidity and completeness of recovery, it is probable that they originated in transient meningeal and cortical hyperæmia. Four years later, his epilepsy began. During the interval, various undoubtedly syphilitic symptoms manifested themselves.

It may not be inappropriate to observe here, that epilepsy occurs more especially as a later manifestation of syphilis than any other of the nervous symptoms usually associated with

tertiary or tardy stages; for, while it is daily becoming more apparent that these lesions may occur at a very much earlier period of the disease than was formerly imagined, epilepsy is, of them all, the one least apt to occur as a "precocious" syphilitic disorder of the nervous system, while it is frequently encountered later. (Maureau, *Annales de Dermatol. et de la Syphilis*, X, 2, 1879.)

It is noteworthy, then, 1st. That my patient became epileptic at an age (26 years), when essential epilepsy almost never occurs for the first time. 2d. That his convulsions are and have been, for the most part, limited to the right upper extremity. 3d. That the convulsions always last for some time before he is deprived of consciousness, and that sometimes he remains conscious throughout the attack. 4th. That there is never an initial cry. 5th. That the convulsions have always been *preceded* by atrocious headache. 6th. That his general condition, when first treated by me, was indicative of most marked mental hebetude, associated with a profound cachexia, conditions rapidly improving under anti-syphilitic treatment.

This condition of objective and subjective symptoms justifies, I think, first of all, a diagnosis of symptomatic epilepsy; and next, of epilepsy, symptomatic of syphilitic intra-cranial disease, since we have, in addition, a clear history of syphilis, along with that of the beneficial influence exerted by an anti-syphilitic treatment.

It is curious, in this connection, to observe that while my patient complains of his dreadful headaches, starting near his right parietal eminence; and while the bone at this region is very tender to pressure and so enlarged that, to the eye, a singular "bizarre" appearance of one-sidedness is given to the skull, the convulsions did not occur upon the left side of the body. In the left parietal region there was no tenderness to pressure, nor any enlargement; yet this area has been always complained of as occasioning most intense suffering. While, now, it would seem that convulsions occurring in the left upper extremity, would be, in the present instance, in harmony with what we know of brain function, and would complete the value of my case as a typical one; still, I think

the condition admits of a ready and rational explanation. The extension of the syphilitic process which originated in the dura mater, took place upon the right side, in an outward direction, implicating more especially the cranial bones, in a gummy osteitis; while upon the left side of the cranium, the meningeal infiltration, beginning as upon the other side, has tended rather to invade the cerebral cortex than the parts more external.

To what extent the fibrotic changes in his kidneys have influenced the patient's general health, it is impossible to conjecture. Beyond the slight œdema of the eyelids, there have been no symptoms of Bright's disease, except those derived from urinary examination. Certainly, the latter disease is quite incapable of inducing the series of cerebral phenomena experienced. Whether, indeed, the renal disorder is not an expression of the general disease, is an interesting question, but one with which we need not concern ourselves at present.

From lesions of the convexity of the brain, my next case transfers our attention to syphilitic alterations of the base, since it is unquestionably here that we must look for the origin of the symptoms displayed. The case is as follows:

CASE II.—February 1st, 1877, Lizzie Brown, a mulatto prostitute, rather too freely addicted to alcoholic indulgence, 29 years of age, dates the beginning of her syphilis to a sore upon her vulva, two years ago, which was accompanied by a suppurating bubo. One year ago, she was treated by me for a simple, non-infecting chancre of the right labium majus. She professed never to have had a skin eruption, but had had sore throat, "rheumatism," alopecia and cervical adenopathy. Under the ramus of the left jaw (February, 1877) was a glandular swelling. This had been present nearly two years, and was as large as a pigeon's egg. Her record shows that this enlargement suppurated, and was lanced March 9th. From the beginning of the treatment until April 3d, she was kept upon potassium iodide in combination with mercury and tonics. Upon the latter date, she complained of pain in her left eye and dimness of vision, and of much headache. No strabismus was visible; but in looking towards the right she always saw a double image. There was no difference of tension of the eyeballs. The pupils were equal and fairly active.

March 12th.—No pronounced improvement. Since day before yesterday, she has had a very decided paralysis of the

right side of her face. She is quite unable to close the right eye. In laughing, the face is drawn much towards the left. The tongue is protruded straight. Power of movement seems to be completely abolished from the right side of the face. In eating, food collects between the cheeks and teeth. Upon the right side she has lost the sense of taste. The muscles of mastication of the right side contract fully. The right side of the face and neck are also involved in a considerable degree of anæsthesia. There is likewise difference in the sense of hearing of the two ears, the right one being much less sensitive than the left. She complains of some pain behind the right condyle, but nothing abnormal can be discovered.

Dr. Russell Murdock kindly examined her eyes for me, and his conclusions were as follows, viz.: (May 26th) "Optic discs 'bombeis'; retina and vessels normal. Vision of left eye, $V=\frac{20}{90}$, right eye, $V=\frac{20}{100}$. Paralysis of seventh nerve of right side complete. Paralysis of sensitive branches of right fifth nerve complete; muscular branches unaffected. Paralysis of sixth nerve, right side." I may add that repeated examinations of the urine have revealed nothing abnormal.

The condition of this patient not improving readily, the dose of potassium iodide was increased. On *May* 1st, she was taking twenty-five grains thrice daily. At this time, distressing evidences of iodism were developed upon the face and buccal and nasal mucous membranes. On *May* 3d, weakness of the right arm was complained of, and the iodide was rapidly pushed. By the 12th, she was taking one drachm of this remedy, with one-twelfth of a grain of the biniodide of mercury thrice daily. The dose was gradually increased to two drachms of the iodide thrice daily, by *July* 1st. On *July* 7th, decided improvement was, for the first time, noted. From this time, improvement was slow but gradual. Towards the end of summer, she went to Washington greatly improved generally, but with a noticeable degree of facial palsy remaining. On *June* 26th, 1878, "Her sight has continued much improved, and she never sees double. There is still much impairment of facial motility, and a trace of anæsthesia persists. For a month past, she has been conscious of a decided loss of power in her right arm, and is sometimes quite unable to retain her grasp upon articles, which are allowed to fall to the ground." On this occasion, alleviation was speedily afforded by moderate doses of the iodide.

This patient remains an occasional visitor at the Dispensary. Her facial paralysis seems to give no promise of fur-

ther improvement. Throughout the whole attack, headache was an insignificant and inconstant symptom.

There was present here, paralysis of three cranial nerves, viz: of the sixth nerve and of the seventh nerve, the portio dura completely, the portio mollis partially; all upon the right side. There was, moreover, hyperamia of the optic discs. It is quite possible that these symptoms may have resulted from more than one lesion of the brain or meninges; but it is so easy to account for them all as depending upon a single morbid process, that I think we can hardly hesitate. In the first place, it is most probable that the paralysis of all the sensitive fibres of the trigeminal nerve was due to a lesion of the trunk before its division into the three branches, and involved the Gasserian ganglion or the proximal portion of the nerve. At the same time, it will be observed that the muscular fibres of the fifth nerve remained unaffected. The two roots pass through the dura mater at the apex of the petrous portion of the temporal bone. The sensory root here enters the Gasserian ganglion, while the motor root passes *underneath*. The Gasserian ganglion, be it especially remarked, is intimately attached along its upper surface to the dura mater. This latter circumstance may now account for the participation of this ganglion in the lesion of the dura mater, while the motor roots from its position escapes.

Turning now to the sixth nerve, we find that it pierces the dura mater immediately behind the posterior clinoid process, and passing through the cavernous sinus, enters the orbit through the sphenoidal fissure. The seventh nerve enters the internal auditory meatus after passing forwards and outwards upon the crus cerebelli. Thus, we can readily perceive how these nerves, traversing the dura mater, become involved in an exudative lesion of this membrane, which, in the present instance, we have sufficient reason to consider syphilitic. Let us imagine an area of meningeal infiltration, whose anterior limit extends as far as the left posterior clinoid process, whose posterior margin reaches and involves the seventh nerve before entering the internal auditory meatus. Within this tract the sixth nerve would penetrate. A syphilitic deposit, of a diffused character, in the dura mater,

would, therefore, readily account for these several paralyses. The incompleteness of the recovery may have been due to an incomplete removal of the exudation which subsequently became organized, and whose pressure upon the nerve fibres was the original cause of the several lesions. The paresis of the right upper extremity was attributable, in all likelihood, to meningeal hyperæmia. The slight engorgement of the optic discs was hardly sufficiently pronounced to be distinctive, but, so far as it went, may be considered as indicative of corresponding intra-cranial changes.

In addition to the gradual supervention of the paralyses, and the multiplicity of the lesions characteristic of syphilitic cerebral affections, this case affords another point of interest in its extraordinary resistance to the action of anti-syphilitic remedies, and the enormous doses required to finally overcome the morbid action. This, however, is not such a very unusual occurrence when syphilis attacks the nervous system: and it is a matter of the utmost importance that this peculiarity should be borne in mind in treating these affections: for, doubtless, many remediable conditions have been, and are still, daily abandoned to their deadly course, after a brief and insufficient anti-syphilitic treatment has convinced the medical man of the non-syphilitic character of their origin.

My third case is one exemplifying destruction of brain substance with more or less permanent results.

CASE III.—Ann Maria B., a negress, thirty-four years old, was brought to the Special Dispensary, *February 26, 1876*. Her husband who accompanied her, gave the following history: He contracted pock seventeen years ago and underwent the usual constitutional manifestations. Three years subsequently, he married his present wife. Since then, he claimed to have had no other symptoms than such as he has been treated for by me, (a gummatous ulcer of the penis). The wife has had numerous still-born children, but never a living child. She had not been subject to cutaneous eruption; but for nine years had suffered greatly from severe pain in the head. Sometime in 1874, after retiring for the night, in seemingly perfect health, she was seized with convulsions. She remained in a convulsive state several hours, and during this time frothed at the mouth and bit her tongue. She remained unconscious three days. The attending physician

speedily salivated her. As she regained consciousness, it was noticed that her whole right side was paralysed and that she was quite unable to speak; as far as is remembered, there was no facial paralysis. After two weeks, muscular power began to return and has slowly improved until now (1876), when it is nearly perfect.

For a long time, the only word at her command was the name of her husband, "Frank." Gradually the power to repeat words, when spoken by others, returned to her, and when first seen by me, she was able to command many words, in this manner. The mind, however, had never recovered its former vigor. She could attend to her household duties, such as cooking, washing, etc., and was clean and tidy in her habits, but she could not make purchases or engage in any business transaction. Her menstruation was repeated twice monthly.

At the time of her appearance at the Dispensary, she seemed to be stout and well nourished and presented no evidence of syphilitic disease. It was easy to see, however, that her intellectual condition was far from normal. She was exceedingly timorous, and when questioned, wept. This interfered so much with her examination that some time elapsed before her real condition could be ascertained. Her general health was good and her thoracic organs in healthy condition. A firm tumor of large size was observable in the abdominal cavity, upon the right side, and evidently connected with the uterus.

She was quite unable to recall the names of any, even the most common article; but when told would immediately repeat almost any word; in the next breath, however, she would be unable to remember it. When asked to name a chair, she without hesitation replied "stool;" being corrected she repeated "chair," but when asked immediately afterwards, replied "stool." She could find no word to describe table, but would look perplexed and shake her head, or would endeavor to explain by exclaiming "eat," "supper," etc. It was the same with nearly everything. Some words she could not pronounce at all. "Watch," she could only pronounce "wash" when hearing the word spoken. "Spittoon" being pronounced for her, she could reply no more accurately than "pitsiloon," "pitstoon." Her conversational powers, limited as they were, consisted entirely in the use of nouns and verbs. Thus, when asked upon one occasion, where her husband was, she replied, "Frank—gone—get—money." She was, however, for the most part, unable to converse. Anti-syphi-

litic treatment was prescribed, and though irregularly followed, with satisfactory results.

In *May*, 1877, however, a large and very painful node appeared upon her right humerus, and allowed no rest day or night, until actively attacked by appropriate treatment, when it promptly yielded. Since she has been under observation she has improved in many respects. She no longer becomes alarmed and tearful when spoken to, and is evidently improved in her intellectual condition. When, however, a sentence of more than a few words or expressing more than a single idea is addressed to her, she turns in despair to her companion or shakes her head in perplexity. Her conversational power is but little improved. During a recent interview, indeed, upon meeting me she exclaimed plainly, "watch," showing that she remembered her old difficulty and had surmounted it.

Her urine has been frequently examined and remains healthy. The abdominal tumor is larger and occasions some discomfort. At present she is free from symptoms of syphilis.

The symptoms in this case are referable directly to lesions situated in the cerebral substance itself. The hemiplegia was right-sided and indicated, consequently, a lesion situated in the left side of the brain. The aphasia likewise affords confirmatory evidence that the left side of the brain was diseased and enables us to locate more precisely the seat of the lesion. It is of interest, however, to consider, for a moment, the probable origin of this morbid process in the present instance; whether it was to be looked for in a gummy tumor occupying that part of the brain in which the faculty of language resides, or whether it was due to disease of the middle cerebral artery, resulting in stenosis of that vessel, and consequent cerebral anæmia and softening. Since the localization of the faculty of speech in the third frontal convolution of the left cerebral hemisphere by Broca, Hughlings Jackson has announced that the lesion producing aphasia is most commonly due to embolism of the left middle cerebral artery, produced by valvular disease of the heart. Now, it matters not whence comes the cause of the arterial obstruction; and it happens that since Heubner's writings upon endarthritis of the cerebral vessels, we have no difficulty in ascribing these conditions, occurring in syphilitic subjects, to cerebral anæmia

following narrowing of the left middle cerebral artery by a purely syphilitic process.

There are, to my mind, ample reasons for the belief that the symptoms in the present case were produced in this manner rather than by a gummy tumor of these parts. It is true, the symptoms began with a convulsive attack; but this has never been repeated; and although convulsions are rare in embolism and softening of the brain, they, nevertheless, are well known to occur. On the other hand, the suddenness of the onset is unlike the effect of a cerebral gummy tumor, which usually reveals its presence gradually, and rarely in the fulminating style here displayed.

At the present time, this patient remains aphasic, or rather, she has a verbal amnesia, and withal, decreased mental power; though this is, by no means, proportionate to her difficulty in speech, as is shown by her bright expression, the readiness with which she recalls many events, and with which she performs her domestic duties. She suffers now, not from syphilitic disease of her brain, but from its relics; from a permanent destruction of brain tissue, the result of a syphilitic process.

And this brings me to the concluding point of this paper. It will be universally recognized that not one of the symptoms of brain disease observed in these patients, presented a feature which could, in any special sense, be termed syphilitic, which could not, equally well, be produced by a non-syphilitic malady. At the same time, they show that widely different morbid conditions may arise from the same source, and that this source, probably more than any other in the pathology of these affections, is within the influence of our art. And it daily happens, that their true nature remains unrecognized, and patients drift into suffering, helplessness, imbecility and death, when the timely and judicious administration of mercury and potassium or sodium iodide could have saved them to life and usefulness. And let it not be forgotten, that if we are to cure these patients, it must be while the *specific* processes are developing or in full activity, when the membrane is hyperæmic and beginning to thicken, the gumma forming, the artery narrowing; and not after the

essential parts have been destroyed or crowded out by the unwelcome stranger.

Usually, it is not difficult to recognize the presence of syphilis in these stages, in view of the curious combinations of symptoms displayed; and it is incumbent upon us, not to be unmindful of the possibility of a syphilitic origin of any given case so that timely advantage of a proper diagnosis may be taken.

The treatment of cerebral syphilis, then, consists in the treatment of processes essentially syphilitic; and it must be kept in mind, that, apart from these, the results of syphilitic disease of the brain are identical with those of various other affections; they are the indelible traces of a battle that has, maybe, long since been fought.

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ART. II.—**Observations Upon the Use of an Improved Splint for Fractures of the Forearm.** By E. H. COOVER, M. D., of Harrisburg, Penn.

The treatment of fractures of the forearm and hand—particularly those occurring between the upper third of the forearm and the distal ends of the metacarpal bones of the hand—is a subject upon which the opinions of the surgical profession have been variously divided. Many valuable theories have been advanced from time to time, in support of which cases have been cited by the authors to prove the practical usefulness of each particular course of treatment. Some very eminent surgeons maintain that each fracture requires a special appliance and treatment; while “Dr. Lewis L. Pilcher, of Brooklyn, affirms that after the reduction of the fracture every support necessary for its satisfactory retention is afforded by the tissues which surround it, with the single addition of an adhesive strip snugly encircling the parts so as to firmly grasp the injured structure” (*New York Medical Record*, page 74, July 27, 1878).

It is not my purpose to enter upon a discussion as to the advantages of the different varieties of treatment employed. They are all, more or less, known to the profession, and the

majority of practitioners have selected and followed those, which, in their judgment, have promised the most satisfactory results. My object in coming before the profession is solely for the purpose of presenting for their consideration a splint of my own design as an appliance for fractures of the forearm and hand—one which has fulfilled every requirement in treating cases of this kind which have come under my professional care during the past twenty years.

It is necessary that, after the fracture has been reduced, the ends of the broken bone should be retained in apposition; and in order to accomplish this, the forearm and hand should be made to assume a position between pronation and supination, thus bringing the surrounding tissues in a line with the course of the bone, and preventing displacement by muscular contraction. To retain the parts in a natural position, requires an appliance which will not only hold the fracture together, but one that will meet the natural plane of the arm, thereby securing the preservation of the natural contour of the arm. Of the many splints in use, nearly all require the use of compresses, which are objectionable on account of the difficulty experienced in getting them of the proper size and shape, and of preventing them from flattening and shifting out of place.

The splint to which I wish to call attention meets every indication, and does away with the use of compresses altogether. It is made of light wood, well seasoned, so as to preserve its shape, and is made to extend from a short distance below the elbow-joint to the palm of the hand, where it is curved upon itself, forming a cylindrical-shaped rest for the fingers to grasp. It is so carved out as to adapt itself to the natural contour of the limb, and can be readily applied



in a few minutes. This splint is illustrated by the accompanying cut.

When required for use, the splint is covered with a layer or two of sheet wadding, or, what is suggested by Dr. John N. Packard, of Philadelphia, is preferable—two layers of canton flannel retained in place by a roller bandage.

Extension and counter-extension having been made, with the arm in a position between pronation and supination, and the ends of the fractured bone having been made to abut one against the other, the splint is placed upon the inner surface of the arm to which it conforms and is retained by a light bandage. The arm and hand being in a natural position, the bone will be in line; the channels for the nerves and blood-vessels will not be displaced; the muscles and tendons will lie in their natural grooves, and the periosteal covering will not be twisted or drawn upon—thus avoiding causes which lead to congestive inflammation, which, in its turn, is liable to cause first, an effusion of serum, and then of fibrinous matter along the sheaths of the muscles and tendons. This plastic matter speedily forms adhesions which, if not promptly broken up, will render the limb permanently stiff.

My attention was called, by Dr. N. L. Orth, surgeon to the Pennsylvania Railroad Company at this place, to the fact that, when a splint so perfectly adapts itself to the parts is used, an entire absence of provisional callus is observed. A careful examination in all cases treated since has failed to detect the presence of that excrescence which, not only excites unnecessary inflammation, but retards the process of union.

If the fracture is near the wrist-joint, and the styloid process of the ulnar bone is prominent, which is often the case, or if the fracture is very oblique, and extends to a distance along the surface of the bone, I would recommend a light binder's board splint to be laid on the back of the arm and hand. This, however, is seldom required—the particular construction of this splint being such as to avoid all dangers of displacement or the provoking of inflammatory action.

Where no injury has been done to the soft parts, the dressing need not be removed for several days. But after the first week, I encourage the use of the thumb and fingers where there is no permanent injury to the wrist-joint. And where there is such injury, as soon as the inflammatory action subsides, as I consider the gradual recovery of motion essential in restoring the limb to its usefulness, after the second week, I cut away the hand part of the splint and urge the

more extensive use of the fingers until they can be closed upon the palm of the hand. This accomplished, I expect the patient to use a pen or pencil, or a knife and fork at the table without fear of injury to the fractured limb. I am indebted to Dr. John H. Packard for this idea, and have used it in my last cases with the happiest results.

Several professional gentlemen have written to me to know why I curve the hand so heavily upon the ulnar bone. In reply, I would say that I consider that the natural position of the hand, in its relation to the forearm, has been greatly overlooked. The hand and arm, when in a position between pronation and supination, is curved pistol-shaped; and in order to make my splint conform to the natural plane of the arm, I was obliged to give it that shape.

I will add, that in cases where it is difficult to detect crepitus, or in the absence of positive evidence that a fracture exists, or even in a severe sprain, this splint will afford speedy and permanent relief—thus effecting a painless and radical cure.

ART. III.—**The Salisbury Plan of Treatment of Consumption.**

By EPHRAIM CUTTER, M. D., Boston, Mass.

To avoid “rash misconceptions and uncandid reflections that are apt to arise from a partial view of any subject,” I think it best to tell what I know as a witness. In so doing, I ask the right of a witness, to have a fair hearing so long as competency, honesty and courtesy are maintained, and the testimonies are confined to facts. Says Ram on *facts*, “Society always respects intense convictions of duty.” Besides, it is the duty of any member of our profession to divulge any evidence that he believes is of a value. So long as he respects the rules of good breeding, the profession is bound to receive the testimony in the same spirit with which it is offered.

Consumption is a subject of the most momentous importance to all. Every year in this country, it is estimated that one person out of forty-five dies. One-fourth of these are also estimated to be directly or indirectly due to consump-

tion. So that over 700 deaths are occurring daily. Notwithstanding the history of medicine is crowded with the literature of this disease, still, never since the world began has any man come forward (with one exception), and proved the synthesis of this disease by the tremendous agency of food. I testify that Dr. Salisbury has done this. As long ago as 1858 (twenty-one years), he had a paper ready for the press, in which he gives the records of one hundred and ten autopsies of animals that he killed by consumption induced by feeding. I have perused these records, and I am happy to state that they are now in the hands of the Agricultural Department at Washington. Of the 2,000 animals subjected to experiment, 200 died. This practical mode of approaching any subject is what is wanted in this age. This paper, it seems to me, entitles Dr. Salisbury to consideration, if not gratitude, respect and honor.

Again, as a witness, I testify, that about eleven years ago I became acquainted with the fact that Dr. Salisbury had a work ready for the press on the *Causes and Treatment of Consumption*. Since I learned its scope, and practically tested its precepts, I testify that I can endorse its plan. Moreover, I have earnestly, persistently, and with all my might, urged him to give this work to the world. "From a fear of not pursuing," as he said, "a course that includes the most right and the least wrong," he resisted my appeals until he, at last, consented to publish it by subscription in connection with my own corroboration, to wit:

I—Fasciculus. "A new physical sign of the pretubercular state."*

II—Fasciculus. Morphology of consumptive blood.

III—Fasciculus. Treatment of 73 cases of consumption by the Salisbury plan—now in the hands of Dr. Hays, editor of the *American Journal of Med. Sciences*, Philadelphia, for publication.

*This essay has privately been submitted to Dr. Henry I. Bowditch, President of the State Board of Health of Massachusetts; Drs. N. S. and F. H. Davis, J. Nevins Hyde, and Alexander Fisher, of Chicago; Prof. Vandever and Dr. W. H. Bailey, of Albany, N. Y.; Judge Dobbin, of Baltimore; Rev. Joseph Cook, of Boston; Dr. Edwards, Editor of this Journal, and is now in the hands of Prof. M. L. James, of Richmond, Va.

I testify that I have presented, in a courteous manner, this subject to over sixty public and private audiences, illustrated by micro-photographs taken with the best modern instruments of precision, and projected on a screen. Among the individuals who have seen these demonstrations, are Dr. Lewis A. Sayre, of New York City; Profs. Oliver Wendell Holmes and R. H. Fitz, of the Harvard Medical School, Boston; Drs. George M. Beard and Louis Elsberg, of New York; Judge Dobbin, of Baltimore; Dr. G. B. Harriman, Dentist, of Boston; Dr. James R. Nichols, Editor *Journal of Chemistry*, Boston; Dr. J. J. Caldwell, of Baltimore, etc.; also, to the Richmond Academy of Medicine, the Baltimore Medical and Surgical Society, Chicago Medical Society, etc. These names are given, not as endorsers or condemners, but as witnesses to my demonstration, and to show that I have honestly and dispassionately worked to back up my assertions with physical exhibitions.

I also testify that, partly through my influence, the article in the *Medical Monthly* for September, 1879, was published; that the fasciculi alluded to embrace the results of my experience which go to establish the truth of the "Salisbury plan."

In relation to the prescriptions in Dr. Salisbury's paper, I will say, that the careful reader will note that they are simply suggestive, and can be replaced by like tonics. To those objecting to the composite character of the prescriptions, experience assures me that combinations in some cases cure, where single medicines fail. I say, also, that it is possible to treat cases successfully by the diet plan of Salisbury alone; but those who know human nature understand the difficulty of carrying out this plan. It requires, as things now are, in my opinion and experience, a high order of mind on the part of the patient to treat cases with absolutely nothing but food-medicine.

I testify that, in order to show to those interested, whether the results obtained by Dr. Salisbury and myself would follow on a larger scale, and to give an opportunity for them to watch and see the practical workings of the plan, I have sought facilities, and they have been placed at my disposal.

I propose, first, to try to repeat Dr. Salisbury's experiments in the synthesis of the disease at Mr. Baker's model piggery, at Ridge Hills Farm, Wellesley. Respectable physicians will be asked to pronounce on the health of the animals, and such as are declared sound will be treated with yeast food; and at the expiration of eight to twelve weeks, when any animal dies, I shall summon the same gentlemen to witness the autopsies.

Second. I propose to treat the cases that are sent to me with written diagnoses by respectable physicians; to report the histories to the senders, from time to time; and at a suitable moment, before the next meeting of the American Medical Association in May next, to assemble the sending physicians (if they will come), and report to them the histories of the faithful cases. I then propose to submit the report of the council, be it adverse or favorable, to the American Medical Association.

Third. There is, then, to be no controversy. The affair is to be one of facts—not opinions. Any attempt to thwart the labors by unfair dealings will relegate the instigators to the pale of conduct unworthy of the age.

Fourth. If, after the experience of more than twenty years, and of over 1,500 cases of treatment by Dr. Salisbury and myself, it should be found that I have been mistaken, I will apologize for my mistake; but I will not ask pardon for having acted up to my convictions of duty.

I testify that the "Salisbury plan" has been one of comfort where doubtful and not doubtful cases, supposed to be consumptive, fail to furnish the physical signs in the blood; and hence become cases of negative diagnosis of consumption. The following case from Fasciculus II is an example:

CASE XVI, Series 2. In May, 1875, Mrs. Rev. D. O. Mears, of Cambridge, Mass., was found in bed with a chronic disease, the prominent symptoms of which were cough, emaciation, profuse night-sweats, severe pain throughout the left chest, and an excessively irritable state of the nervous system. It was a case of a chronic invalid, turned over to the writer by the eminent and deservedly distinguished Dr. Morrell Wyman as probably tuberculous—adding the opinion that a fatal termination at no distant period must be expected,

as her father died of consumption. Suspiciously, there was an absence of any marked physical signs of abnormal changes in the lung substance. It was a doubtful case.

On examining the blood by the Salisbury method, the red corpuscles were found to be pale, thin and flat. The white corpuscles were not changed, nor were they too numerous. There were *no fibrine filaments discernible; no vegetable filaments; spores none; no spore collects*. This negative evidence settled the diagnosis. It was decided that there was, at least, no tuberculosis, whatever else was the matter or derangement of the system. One month's faithful treatment by animal food in the stomach, quinine by the mouth, and acid baths to the skin, was followed by a return of the blood to the normal standard of color, plumpness and clean-cut outline.

By this time, it had been discovered that the uterus was retroverted completely, as the result of two very severe labors. Her inability to ride or walk about, and the great general debility, combined with a naturally frail and weak constitution, rendered it probable that the prediction of her last physician would have been realized had she continued much longer in the state he left her in.

Incidentally, the history shows the value of the diagnosis made, or rather decided by the inspection of the blood. It was satisfactory thus to settle the question immediately, which otherwise would have vexed and restrained, to wit: whether there was tuberculosis or not. The confidence inspired was curative of itself, when it was said that there were no characteristic signs of the dreaded disease. Subsequent history has verified the truth of the diagnosis, and when last seen in October, 1878, she ambulated, lived, kept house, and performed the duties incumbent upon her station like any healthy wife.

In the spring of 1879, while residing at Worcester, Mass., she contracted measles from her son, and died in a short time.

Remarks.—In a conversation with the practitioner named as to the Salisbury diagnosis, he said that he had lived to see many theories come up in medicine, and then dropped as useless. Hence he made it a point to doubt everything; that he doubted this, and did not believe that consumption could be thus detected and diagnosed. I did not argue with the gentleman, being willing to wait for the developments of

time. Still I must say that another physician hearing me tell this story—though he has not endorsed or condemned the Salisbury plan—somewhat waggishly asked, “does Dr. W. doubt everything?” Now, the writer is willing to meet a reasonable amount of doubt by presenting his evidence. Hyper-doubt he does not propose to meet. Should his evidence and mode of presentation be deemed insufficient and inconclusive, he will regret the lack of abilities and the want of tact. It is possible to present facts badly; but such presentation and want of consequent acceptance alter in no way the truth.

Again, I am willing to own that I make mistakes; I am not infallible. Still, in full recognition of my short-comings, deficiencies and failures, I feel that I do not wrong any one by acting out my desire to benefit all concerned in the way I have laid out above; and I hope that I shall always be believed as having good reason for publishing what I bring before the profession; whether my reasoning, style and manner of reporting observations are approved or not. In my opinion, if the experience of Dr. Salisbury and myself should be realized by all physicians in this country, at least thirteen thousand lives annually could be saved by the detection and treatment of the pretubercular state alone.

In his systematical work, Dr. Salisbury points out that the condition called consumption is found in the blood one year before organic lung disease. From experience, I believe that a case of consumption in the pretubercular state is as curable as typhoid fever. Allow me to ask, in view of the supposed possibility of saving those thirteen thousand lives, can the profession afford to pass by with indifference the facts that are laid before them in the papers and works alluded to? Surely, I feel as if I do not want so many people to die uselessly; and this number is sure to include some of the very ones who are disposed to treat with neglect, and perhaps contempt, the works of Dr. Salisbury. For my part, I am determined that their blood shall not be on the skirts of my garments.

In court, two witnesses establish a truth. Three have testified in this journal. More can be produced. I am very

well aware of the estimate some place on Dr. Salisbury's labors; but he has not had a fair hearing. I ask—I demand a fair hearing. Now, indeed, when I reflect on the utterances just made, I feel as if some one should stand between the living and the dead; some one should overcome the pride of position, the prejudice of place, and the love of authority that frowns on a man who says that he has caused and cured consumption—that has offered freely to show and impart his evidence, methods and patients to any physician who will visit him at his home. Any such will receive a courteous reception.

NOTE.—In order to show who J. H. Salisbury, A. M., M. D., is, I append a list of some of his published works up to 1879.

1. Analysis of Fruits, Vegetables and Grains. *N. Y. State Geological Reports*. 1847-48-49.
2. PRIZE ESSAY.—Chemical Investigations of the Maize Plant in its various stages of growth, with the temperature of the soil at various depths, and that of trees in different seasons of the year. 206 pages. *State Agricultural Reports of N. Y. and Ohio*. 1849.
3. Chemical Analysis of Five Varieties of the Cabbage. 1850.
4. Rheum rhaponticum. Chemical examination of the various parts of the Plant. 1850.
5. Chemical Examination of Rumex crispus. 1855.
6. Experiments and Observation on the Influence of Poisons and Medicinal Agents upon Plants. 1851.
7. Chemical Examination of the Fruit of five (5) varieties of Apples. 1850.
8. Chemical Investigations connected with the Tomato, the Fruit of the Egg Plant, and Pods of the Okra. 1851.
9. History, Culture and Composition of Apium graveolens and Cichorium intibus. 1851.
10. Some Facts and Remarks on the Indigestibility of Food. 1852.
11. Compositions of Grains, Vegetables and Fruits. *Ohio State Agricultural Reports*. 1861.
12. Microscopic Researches, resulting in the discovery of what appears to be the cause of the so-called "Blight" in Apple, Pear and Quince Trees, and the decay in their fruit; and the discovery of the cause of the so-called "Blister and Curl" in the leaves of Peach Trees; with some observations on the development of the Peach Fungus. Illustrated with six plates. *Ohio State Agricultural Reports*. 1863.
13. Chronic Diarrhoea and its Complications, or the diseases arising in Armies from a too exclusive use of Amylaceous Food, with interesting matter relating to the Diet and Treatment of these abnormal conditions, and a new Army Ration proposed with which this large class of diseases may be avoided. *The Ohio Surgeon General's Report* for 1864.
14. Something about Cryptogams, Fermentation and Disease. *St. Louis Medical Reporter*, February, 1869.
15. Probable Source of the Steatorrhone folliculorum. *Do.*, January, 1869.
16. Investigations, Chemical and Microscopical, resulting in what appears to be the Discovery of a New Function of the Spleen and Mesenteric and Lymphatic Glands. *Do.*, Aug., 1867. 29 pages.
17. Defective Alimentation a Primary Cause of Disease. *Do.*, March and April 1 and 15, 1868. 70 pages and two plates of illustrations.
18. On the Cause of Intermittent and Remittent Fevers, with investigations which tend to prove that these affections are caused by certain species of Palmellæ. *Am. Jour. Med. Sciences*, 1866. Also in *Revue Scientifique*. November, 1869.
19. Some Experiments on Poisoning with the Vegetable Alkaloids. *Do.*, Oct., 1862. 28 pages.
20. Discovery of Cholesterin and Seroline as secretions in health of the Salivary, Tear, Mammary, and Sudorific Glands; of the Testis and Ovary; of the Kidneys in Hepatic Derangements; of Mucous Membranes when congested and inflamed, and the fluids of Ascites and that of Spina Bifida. *Do.*, April, 1863. Two plates. 17 pages.
21. Remarks on Fungi, with an account of Experiments showing the influence of the Fungi of Wheat and Rye Straw on the Human System, and some observations which point to them as the probable source of Camp Measles, and perhaps Measles generally. *Do.*, July, 1862. One plate. 20 pages.
22. Inoculating the Human System with Straw Fungi to protect it against the contagion of Measles, with some additional observations relating to the influence of Fungoid growths in producing disease, and in the Fermentation and Putrefaction of Organic Bodies. *Do.*, October, 1862. 8 pages.
23. Parasitic Forms Developed in Parent Epithelial Cells of the Urinary and Genital Organs, and in the Secretions. With 34 illustrations. *Do.*, April, 1868.
24. Remarks on the Structure, Functions and Classification of the Parent Gland Cells, with

Dr. Salisbury should be judged by the standard of his own works. Those who hasten to pronounce opinions of him should peruse and not make haste. I also say that I am aware that in France some years ago, there was a raw meat treatment of consumption practised. I heard of such a case yesterday. Still the great trouble was, the patients could not live on this diet from disgust of the palate. The idea is a good one, but it lacks the *rationale*, the system, the evidence of the synthesis of the disease, the twenty years observation, the fifteen hundred cases, and the detection of the pretubercular state of the Salisbury plan.

In conclusion, I testify that long ago I should have given my evidence as to the Salisbury plan, had I received his permission so to do. I rejoice that he now agrees with me that one-fifth of a century, and over a thousand and a half of cases is long enough to wait, and number enough to justify him in saying that he can cause and cure consumption and prove it. As to myself, I am unworthy to unloose the shoe-latchet of

Microscopic Investigations relative to the causes of the several varieties of Rheumatism, and directions for their treatment. 1 plate of illustrations. *Do.*, Oct., 1867. 19 pages.

25. Microscopic Researches relating to the Histology and Minute Anatomy of the Spleen and Lacteal and Lymphatic Glands, showing their ultimate structure and their organic elements, of their highly interesting and important functions, with some remarks on the cause of ropiness of Mucus and the tendency of all healthy and many diseased cells to be metamorphosed into filaments. 1 plate. 34 pages. *Do.*, April, 1866.

26. Description of two new Algoid Vegetations, one of which appears to be the specific cause of Syphilis, and the other of Gonorrhœa. With 16 illustrations. *Do.*, 1867. Also *Zeitschrift für Parasitenkunde*. 1873.

27. Geological Report of the Mill Creek Canal Coal Field. With one map and two plates. Published in Cincinnati, 1859.

28. Analysis, Organic and Inorganic, of the Cucumber. *Cultivator*, 1849.

29. Experiments on the Capillary Attractions of the Soil, explaining some important and interesting principles and phenomenon in Agriculture and Geology. *The American Polytechnic Journal*. 1853.

30. A New Carbonic Acid Apparatus. *Do.*, 1853.

31. Analysis of Dead Sea Water. 1854.

32. Two Interesting Parasitic Diseases; one we take from sucking Kittens, and the other from sucking Puppies. Trichosis Felinus and T. Caninus. *Boston Med. and Surg. Jour.*, June 4, 1868. 6 illus. Also *Zeitschrift für Parasitenkunde*, Hallier. Jena, 1875.

33. Pus and Infection. *Boston Jour. of Chemistry*. January, 1878.

34. Microscopic Examinations of Blood and the Vegetations found in Variola, Vaccine and Typhoid Fever. 66 pages and 62 illustrations. Published by Moorhead, Bond & Co., New York. 1868.

35. Vegetations found in the Blood of Patients suffering from Erysipelas. Hallier's *Zeitschrift für Parasitenkunde*. 1873. 8 illustrations.

36. Infusorial Catarrh and Asthma. 18 illustrations. *Do.*, 1873.

37. Analysis, Organic and Inorganic, of the White Sugar Beet. *Albany Cultivator*. October, 1851.

38. Analysis, Organic and Inorganic, of the Parsnip. *N. Y. State Ag. Report*. 1851.

39. Ancient Rock and Earth writing and inscriptions of the Mound-builders, with a description of their fortifications, enclosures, mounds and other earth and rock works. 49 plates. In the hands of the American Antiquarian Society, and only partially published in their Transactions and in the Ohio Centennial Report. 1863.

40. Influence of the position of the body upon the Heart's action. *Am. Jour. Med. Scienc.* 1865.

41. Material Application of Chemistry to Agriculture. *Albany Cultivator*. 1851.

42. Analysis, Organic and Inorganic, of the several kinds of Grains and Vegetables. *Do.*, August, 1849.

And many other published and unpublished works and papers.

my Master; and I feel as John the Baptist did when he said of the greatest Master and man, "He must increase but I decrease." With such a future I shall be content.

94 Tremont Street.

Original Translations.

From the German and French. By WM. C. DABNEY, M. D.,
Charlottesville, Va.

The Indications and Contra-Indications for Operations in Persons Suffering from Constitutional Diseases.—At the meeting of the International Congress of the Medical Sciences at Amsterdam in September last, M. Verneuil read a paper on this subject, which is pronounced by nearly all the French journals to be of the highest value. The following conclusions of the paper are taken from *Le Practicien*, of October 6th, 1879:

1. Surgical operations are not absolutely contra-indicated in persons suffering from constitutional affections; they are often permissible, frequently useful and sometimes indispensable.

2. The prognosis is, however, much more grave than in healthy persons; it is especially difficult to foretell what influence for good or ill the operation may have on the general disease, or the constitutional affection on the healing of the wounded surfaces.

3. The prognosis, however, differs for different diseases. It differs also according to the form which the disease assumes, the degree it attains, and especially according to the pathological changes in the organic solids and fluids.

4. The danger inherent to the diathesis is least when it is still in the stage of development; it increases very much when chemical and histological changes in the fluids and solids of the organism make their appearance. The danger becomes extreme when the great viscera, such as the liver, kidneys, spleen, heart or lungs present lesions, such as fatty or amyloid degeneration or cirrhosis, or when they are invaded by tubercle, syphilitic deposit, cancer or other new formations.

5. Persons suffering from constitutional disease should not be deprived of the benefits of surgical operations, even though such operations may be attended with danger; but the sur-

geon should be careful to do all in his power to lessen the danger and to insure the success of the operation. It is of the utmost importance to consider well the most favorable time for operating, the best mode of procedure, the most suitable dressing; and above all, he should be careful to institute, at the time of the operation and afterwards, and before too, if possible, the most vigorous hygienic, dietetic and remedial measures, with the especial view of combatting the constitutional disease.

6. In order to understand thoroughly the indications and contra-indications for surgical operations, the surgeon should study most carefully the pathology, natural course, terminations and medical treatment of the constitutional disease. Such knowledge (which it is to be regretted that all surgeons do not possess) would give more confidence than is generally felt in the efforts of nature, aided by wise therapeutic measures.

7. A careful examination, however, of the results, both immediate and remote, of operations on persons suffering with constitutional diseases, tends to dissipate our illusions as to the power of surgical art. It is a melancholy fact that complete and lasting triumphs are rare. The operation itself, indeed, gives good results in a large proportion of cases; a local manifestation of the disease is perhaps removed; but too often it is only to increase in intensity and rapidity the progress of the constitutional affection. It is a well established fact that, in many cases, the scrofulous and cancerous live longer in the hands of the physician than they do if they fall into the hands of the surgeon.

8. It is proper to add, however, that, although more often palliative than curative, surgical operations on persons suffering from constitutional disease are sometimes of great utility. In extreme cases, they may prolong life, mitigate suffering, and to the patient, at least, open the door to hope. In less severe cases, and when the constitutional disease may be treated with success, an operation promotes the cure by gaining time, removing causes of danger, and clearing the way for the use of therapeutic means.

Treatment of Fibroid Tumors of the Uterus.—M. de la Faille read a paper on this subject before the International Medical Congress, of which the following are the conclusions: (*Le Progrès Médical*, September 27th.)

1. The treatment of fibroid tumors of the uterus is directed chiefly to the discharge of blood which accompanies them.

2. The situation and development of the tumor modify its treatment.

3. The administration of medicines internally give little prospect of success; it is only worth trying in certain cases of intra-parietal fibroids.

4. One of the most rational modes of treatment is the hypodermic injection of ergot.

5. The method of dilating the uterus by means of spongetents or laminaria is not devoid of danger; it requires, at any rate, the prompt removal of the dilating substances.

6. Removal by the *écraseur* is preferable over all other modes for the removal of fibrous polypus.

7. Intra-uterine and sub-peritoneal fibroids are best treated by enucleation.

8. In cases of gastro-hysterotomy, intra-peritoneal treatment of the stump is preferable to the extra-peritoneal.

9. Total extirpation of the uterus offers very great advantages in many cases.

10. Castration of women (removal of the ovaries) is rarely indicated in cases of fibroid tumors of the uterus.

Resection of the Elbow-Joint.—At the meeting of the French Association for the Advancement of Science, in September last, M. Ollier, of Lyons, read a paper on this subject. He divided all resections into two groups—those in which the operation should be done more frequently; and those in which its employment should be restricted.

With respect to excision of the elbow, he said his first statistics gave him one death in five operations. Since then, he had operated twenty-three times, and had had no deaths. He thought the operation should be practised much more than it is in France at the present time; and then he considered the circumstances under which it was advisable.

In osseous ankylosis, it is almost universally adopted; when ankylosis is threatening, it should be employed or not according to the other indications. Age should always be taken into consideration. In his practice, M. Ollier had never seen a death in a person under twenty-five years of age, and with infants, success is the rule. In a person under twenty-five, the articulation is reproduced; after that age, a very guarded opinion should be expressed, and the sub-periosteal operation should be practised. The greatest strength does not always correspond with the greatest motility of the limb.

With respect to constitutional diatheses, M. Ollier did not consider them contra-indications unless they were very far advanced. He had operated with success on a woman who had cavities in her lungs; but this was exceptional.

M. Rochard thought the operation was much more extensively employed in France than M. Ollier supposed. He asked at what time the operation should be performed in cases of arthritis?

M. Ollier answered that in suppurative arthritis, whether the joint was open or not, he operated immediately. In fungous arthritis, he abstained as long as conservative treatment held out a prospect of cure. When he lost all hope from this, he was governed by the age of the patient and other circumstances.

M. Roustan asked if relapses were not more frequent after resection than amputation?

M. Houzé de l'Aulnoit thought that resections should be employed with caution, and said that for his part he much preferred a firm ankylosis to the movements almost passively obtained after resections.

M. Ollier replied that the movements of an arm capable of sustaining a weight of fourteen kilogrammes were far from being passive, and certainly such an arm was very far preferable to a stiff one.

Ultimate Results of Operations for the Radical Cure of Hernia. By Dr. Maas. (*Centralblatt für Chirurgie*, 1879, No. 22.) In this paper, the author first gives a sketch of the operations which have been practised at different times for the radical cure of hernia, commencing with the use of the white hot iron as used by the Arabs. He classifies the operations which have been advised and practised in modern times under four headings:

1. Closure of the hernial opening by ligation.
2. Closure of the hernial opening by the use of subcutaneous injections intended to set up adhesive inflammation.
3. Constriction of the neck of the hernial sack which has been previously emptied of its contents, with subsequent extirpation or incision of the sack itself.
4. Constriction of the neck of the sack, with incision or extirpation of the sack itself, and closure of the hernial orifice by ligation.

The results of the first mode of operating were in no wise cheering. The second method is only suitable for small herniæ, which can readily be replaced. The third and fourth modes both give good results when Lister's antiseptic method is employed. Neither of them, however, are satisfactory, so far as the stability of the result is concerned. The patients are cured temporarily; but unless a truss is worn constantly, the hernia dilates the orifice and again forces its way down.

In conclusion, the author says that radical operations are only to be advised when the hernia cannot be otherwise replaced.

On Castration (Battey's Operation).—By Prof. R. Hegar, in Freiburg (*Allg. Wien. Med. Zeitung*, Oct. 14th). This paper is of such very great interest and importance, that it is well worth translating in full. It was read at the late meeting of the Naturforscher-Versammlung, in Baden-Baden, in September last. The paper is based on forty-two cases in which Hegar has practised castration, and these are classified according to the pathological changes which were present in the sexual organs.

In the first class, are included thirteen operations on small tumors. And just at this point, he tells us where he draws the line between ovariectomy and castration. Whenever both ovaries are removed, and the tumors are not larger than a billiard ball, he considers the case one of castration.

The pathological condition of the sexual organs in these thirteen cases was very various. Cystic and dermoid degeneration, par-ovarian tumors, tubo-ovarian cysts, and combinations of these were the most common. Occasionally uterine fibroids were present as complications, and in some cases it could, with difficulty, be determined whether the tumor was ovarian or uterine. Careful examination with the hand and fingers externally, and probe internally, usually cleared up the diagnosis.

The operation in this class of cases was often very difficult. Death resulted in *two* cases. *Eight* times all difficulty was removed, and in *three* cases pain returned subsequently in the abdomen at intervals.

In the second class of cases, castration was practised on account of fibroid tumors of the uterus. *Twelve* cases are recorded in this class. The tumors seldom reached above the umbilicus. When the fibroids were very large, the result was doubtful. *Three* times death resulted from septicæmia. In *six* cases, there was complete relief with the establishment of the artificial menopause and diminution in the size of the tumor. In one of these cases, which was progressing favorably some time after the operation, there were dermoid tumors of the ovaries on both sides. *Twice* the menopause occurred after three and four months respectively. *Once*, with an immense tumor, the relief continued some time, but the patient finally died a year after the operation.

In a third class of cases, the operation was performed *five* times on account of so-called chronic oöphoritis. Death occurred in *one* case. In *three*, the menopause was established

with complete cure, and in *one* case a sufficient time has not elapsed to determine the result.

In the fourth class are included *five* cases of chronic affections of the uterus, such as flexions, infarctions, etc. In *one*, death resulted; in *two* cases, there was complete relief, with the establishment of the artificial menopause; and in *two* cases, too short a time had elapsed to determine the result.

In a fifth group, are included *seven* cases of chronic inflammation of the "uterine appendages." The results, so far as life was concerned, were favorable. In *three* cases, the menopause was established with complete relief to suffering. In *one* case, the menopause was established, and there was great improvement; in *one* case, there was improvement, but there was a regular periodical discharge of blood; in *two* cases, an insufficient time had elapsed to determine the result.

The author, in the next place, proceeds to make some general remarks on the operation. The mortality in his own cases was 16.6 per cent. In *forty-seven* operations by other surgeons which he knew of, the mortality was 30 per cent. With a better knowledge of the necessary cautions, and the best mode of operating, he had no doubt the death-rate would be very materially diminished.

Death occurred *four* times from septicaemia, *three* times from ileus. Careful antiseptic treatment and precautions to prevent ileus would tend materially to lessen the mortality.

The final results with respect to the duration of relief and general bodily condition of those operated on, are very favorable.

The influence of castration on menstruation, in the author's cases, confirms the view as to the dependence of menstruation on ovulation. Of *thirty* cases, the menopause was established in *twenty-six*; in *three* cases, there was an irregular discharge, and in *one* there was a typical monthly hæmorrhage. He thinks the cases of menstruation after castration are to be explained by the presence of a supernumerary ovary, incomplete removal, or congestion about the uterus or some of its appendages.

With respect to the circumstances under which the operation is advisable, he says: "All other means must have been exhausted before this one—so dangerous to life—is resorted to."

Further, there must be pathological changes in the sexual organs to justify the operation. It is not justified by functional affections alone. The changes in the generative organs, which indicate the propriety of the operation, are: A

rudimentary uterus with active ovaries; atresia of the genital canal under certain circumstances; small tumors of the ovaries or ligaments; so-called chronic oöphoritis; recurring inflammations of the appendages of the uterus; affections of the uterus itself, such as fibroid tumors, flexions, etc.

The symptoms and troubles which are due to these pathological changes are a very high grade of disturbance of menstruation, hæmorrhages, pain situated in the diseased part, symptoms of pressure and the so-called reflex neuroses, which so often accompany these pathological conditions.

With respect to the latter, it is often a question how far they are dependent on ovarian trouble; and it should also be remembered, that they may be due to disturbances situated near, but not in, the ovaries. In such cases, the effects of castration in giving relief would be very doubtful.

The mode of operating for castration is essentially different from that for ovariectomy. Antiseptic means are employed, but not the method of Lister. In ovariectomy, the peritoneum is usually in such a condition that it is much more tolerant of handling than when castration is employed. [More than one of the prominent ovariectomists now prefer to operate during peritonitis.] The incision in castration is so small, that the proper cleansing of the peritoneal cavity after the operation is difficult, and the presence of a large amount of fluid in the peritoneal cavity is certainly very injurious and dangerous. The amount of carbolic acid in the spray is too small to prevent decomposition and consequent poisoning by septic material. Then the discharges from the inner surface of the incision may set up peritonitis. The drying up of this discharge is very desirable, as it lessens the liability to absorption.

Lister's method, Dr. Hegar thinks, has this serious objection: It leads to carelessness with respect to the rules for avoiding septic poisoning, such as the cleansing of instruments, cloths, sponges, etc.; and finally, it makes the operator less careful in observing the rule which is so necessary to success. Never visit a patient suffering from an infectious disease for some days prior to the operation.

His actual mode of operating does not differ essentially from that of other surgeons, and need not be mentioned here.

Palatable Castor Oil.—Rub up two drops of oil of cinnamon in an ounce of glycerine, and add an ounce of castor oil. Children will take it as a luxury, and ask for more.—*R. & L. Med. Jour.*, Sept., 1879.

Proceedings of Societies.

Baltimore Academy of Medicine.

Knapp's Modified Operation for Opening the Capsule in Cataract.—Dr. J. J. Chisolm reported great success with the new modification for opening the capsule in cataract operations. The suggestion was made by Dr. Knapp, that if the capsule be opened at its upper edge, and the lens allowed to escape through the mouth-like opening of the bag, the smooth capsular surface will remain in contact with the irritable inner face of the iris, and that thereby much of the iritic inflammation, the chief danger after cataract extraction, can be avoided. Since the first of September, Dr. Chisolm has adopted this method of cystotomy in all cases of cataract extraction. He at present has twelve cases under care—the operations of the past two weeks. He has had no iritis following cataract operations since adopting this method—in now about twenty cases in all.

The plan is not, however, altogether free from objections. In several cases, after closing the eye with a brilliantly black pupil, he has found, upon inspection some days later, that a little blood had gravitated into the open mouth of the sac, and was undergoing absorption very slowly, as it was not easily reached for aqueous solution. This condition may explain the very large percentage of secondary operations at the hands of its suggestor, Dr. Knapp—a number of cases necessitating the after-tearing away of capsular filing—far more numerous than those on which the lens is made to escape through a broad laceration in the anterior capsule.

Tumor of the Orbit Causing Amaurosis, Anosmia, etc.—Dr. J. J. Chisolm also reported the interesting case of a boy, seven years of age, who consulted him six months since with loss of sight in the right eye and very dim vision in the left eye. The eye trouble had been preceded by much headache and nausea. The eyes looked normal, with the exception of some cloudiness of the right disc, indicative of post-orbital pressure, possibly from the region of the sella Turcica. There were no other evidences to explain the cause of blindness. The case was entered “amaurosis from central cause,” and iodide of potassium was prescribed. Three weeks since, the child was brought back to Dr. Chisolm, when he observed this curious condition: Both eye-balls protruded, with ptotic lids much expanded over the project-

ing orbs. When the lids were lifted, the eye-balls seemed perfect, even free from all injection. Pupils were dilated; discs were white from nerve atrophy, and no perception of light could be detected by them in either eye. The right eye-ball projected to such an extent that its posterior surface was on a level with the root of the nose; and yet there was no clouding of the cornea or other evidences of defective nutrition of the eye-ball. The eye-ball of the right side had lost all power of movement. The left eye exhibited an external squint of two degrees, with an inability to turn the eye towards the nose. Thrusting the end of the little finger between the eye-ball and the rim of the socket, revealed the cause of the protrusion. The entire right socket was filled with a hard growth, and the nasal side of the left socket was occupied by a similar one. The cause of the amaurosis was now explained. A tumor, originating in the posterior ethmoidal or anterior sphenoidal cells, had first, in development, encroached upon the back of the orbit or cavity at the optic foramen, causing pressure enough to explain cerebral irritation, and also interference with vision. In its further growth, the tumor seems to have avoided the cerebral space and developed anteriorly, stuffing up the sockets and the nose, destroying smell as well as sight. In its future development, it must produce great deformity of the face.

Large Ovarian Cyst Removed from Pregnant Woman.—Dr. H. P. C. Wilson exhibited a large ovarian cyst which he had removed two days since from a lady who had had eight children. He had diagnosed pregnancy accompanying it, although the patient denied it upon the ground that she had had much trouble with her eight pregnancies from the very beginning of conception, and that she had had no symptoms whatsoever to correspond with her previous experience. Dr. Wilson had made his diagnosis, although he could hear no fetal heart impulses. The softened neck and os, and the peculiar congested condition of the vagina, were to him sufficiently marked signs to induce him to establish the existence of a four months' pregnancy. Some few days prior to the operation, the patient had complained of severe pain in the lower part of the abdomen, which were relieved by large doses of morphine. In this case, Dr. Wilson did not approve of tapping. The lady had come to him from a distance, and desired permanent relief if possible. These tapplings would have to be repeated from time to time, which, in the face of a pregnancy of four months, exhibited positive dangers. He therefore determined to remove the tumor. The sac was large, but with

no extensive adhesions, and therefore was removed through an incision two and a half inches long. The contents were of a dark claret color, and quite fluid. Some parts of the sac were much thickened. The pedicle was too short to clamp, and had to be secured by a carbolized silk ligature, which was left in the abdomen. In cutting through the pedicle, clots of blood escaped, showing an apoplexy of the neck of the tumor, which may have occasioned the pains a few days prior to the operation. The patient had never been tapped.

To verify the diagnosis of pregnancy, as soon as the abdominal incision had been made, one finger was introduced into the opening, and the index finger of the other hand in the vagina. They grasped between them the enlarged uterus corresponding to the fourth month of gestation.

Up to the present time, the patient has done perfectly well. The course of treatment has been the liberal use of morphia hypodermically and the careful administration of nourishment.

Epileptic Convulsions Relieved by Gelseminum, Potassium Bromide, etc.—Dr. P. C. Williams reported the case of a lady, aged 45, who, for the past fourteen years, had been suffering from epileptic seizures, and more recently had convulsions, coming on every morning before daylight. She had been for months under the care of the most noted physicians of Europe without benefit. On coming under his care, six months since, he found that these constantly daily attacks had commenced to act upon the mind, and were slowly reducing her to the condition of a chronic epileptic. He was struck by the fact that her convulsions occurred with such regularity, at from two to four o'clock A. M. Supposing that it may have been brought on in some measure from bodily exhaustion, he ordered her to take a heavy supper before retiring, and also placed her under the influence of tincture of gelseminum in combination with bromide of potassium—twenty minims of the gelseminum and twenty grains of the bromide three times a day—with a double dose of each at bedtime, making one hundred grains of bromide of potassium and one hundred minims of the strong tincture of gelseminum every twenty-four hours. The tincture of gelseminum was made by using twelve ounces of the root to sixteen ounces of alcohol. This is the standard preparation of Baltimore druggists. Under this treatment, the convulsions ceased. The medicine was taken for four weeks and then stopped, when the convulsions returned. Dr. Williams ad-

vised that the medicines be continued as a permanency. At present the patient has used these remedies for four months continuously with marked benefit. She has had no return of the epileptic seizures, is growing fleshy, and rapidly losing the melancholic air and loss of memory which were growing accompaniments of the convulsions.

Dr. Williams has had now much experience with the gel-seminum. He became familiar with its effects in controlling headaches in his own person, and he knows no remedy which has given him so much satisfaction in his general practice. He seldom commences with less than twenty minims as an adult dose, and has often taken himself a teaspoonful at bedtime, with full confidence that he will wake up free of all pain in the morning. Prostration and ptosis are evidences that the medicine has been pushed far enough. In a few hours, these symptoms pass away and leave the patient free of headache. He uses it very freely in his practice.

Croton-Chloral for Facial Neuralgia, Eye Pains, etc.—Dr. R. McSherry reported the case of a sailor who had suffered severely with facial neuralgia, for which he had tried in vain the usual list of iron and quinia tonics, the latter in large doses. Finally, finding no relief, he was induced to try the croton-chloral in three-grain doses, which did no good. When the dose was increased to five grains every four hours, benefit at once resulted, and in a few days the pain, of many weeks existence, had disappeared.

Dr. D. McKew had had similar good results from the croton-chloral.

Dr. J. J. Chisolm had used it extensively for the past few months in eye pains, and with very marked benefit. He had given from five to ten grains at a dose, in glycerine, as the best solvent.

Dr. B. B. Browne read the paper of the evening on the uses of *Pilocarpin in Convulsions—both Puerperal and from other Causes*.

Richmond Academy of Medicine.

(Charles S. Brittan, M. D., Secretary.)

June 17, 1879. Absence of Parietal Bone.—Dr. George Ross reported the case of a child five weeks old, apparently healthy and vigorous, which nursed and slept naturally, but with entire absence of ossification of the right parietal bone. A sensation as of feeling parchment was imparted to the finger as it was passed over this portion of the head.

Tetanus following Vaccination.—Dr. Ross also reported the case of a child, of German parentage, and apparently of pre-

vious good health, in whom vaccination was followed by tetanus. A female doctor had vaccinated the boy on both arms three weeks previous to the attack. One of the arms, at the end of the three weeks, when Dr. Ross was called in, appeared normal; but the other arm was terribly inflamed, and the vaccination scab seemed to have been torn off. A few hours before the Doctor arrived, the child was playing, when his companions noticed a peculiar expression of the face; and soon afterwards, he fell out of the chair in which he was sitting. During the same evening, while his mother was dressing him, he had a spasm, which was soon followed by another spasm. The Doctor, after dark, found him sleeping quietly, breathing good, position natural, etc. But on awaking, it was found that the little patient could not protrude his tongue, and the face was considerably drawn towards one side. Careful examination revealed no recent injury. All the secretions were normal. While the examination was being made, the child had another tetanic spasm, and so on, one after another, until the slightest touch would throw him into another. This condition continued until sunrise the next morning, when he died.

Prophylaxis of Scarlet Fever.—Dr. Ross also reported good results from the use of sulpho-carbolate of soda to prevent scarlet fever. He used it in eight families—the first and original case being the only one in the respective families to have the disease.

Dr. J. S. Wellford has noticed that in many families where the four or six or more children would have the fever, the nursing baby would escape.

The President, Dr. M. L. James, on the authority of Dr. John G. Skelton, reported two cases of scarlet fever occurring in persons aged respectively 75 and 77 years.

The Doctor also stated that in the last five cases of scarlet fever he had treated, the disease, although occurring in families with large numbers of children, had not extended beyond the first case in each family. He had the houses carefully disinfected, especially by every available means of ventilation, and careful isolation of the patients. He believes the poison of scarlet fever communicable at only short distances.

July 1. Vertigo.—Dr. L. S. Joynes remarked that the subject of vertigo possessed a special interest for him, because of the large experience he had had of it in his own person. He referred to the erroneous ideas popularly entertained in regard to it. The majority of the public ascribe the sensation of vertigo to a "rush of blood to the head"—in other words, congestion of the brain, which they consider as calling for

very active treatment, such as general or local bleeding, strong purging, perhaps with calomel, blistering, etc. These remedies are supposed to be necessary to ward off apoplexy, paralysis, or some other grave cerebral disease, of which the vertigo is the warning.

Without denying that these ideas have a foundation of truth in a certain proportion of cases, he said they were certainly erroneous in the large majority of cases encountered in practice. Vertigo most generally occurs in a state of system which is *below par*, with lowered vital force, pallor of complexion, impoverishment rather than over-richness and over-fulness of blood, and a weak rather than an active state of the circulation. That vertigo may readily occur in such a state of system is illustrated by the fact that vertiginous sensations attend the first stage of syncope, whether from loss of blood, or other depressing causes, and are often experienced by persons convalescent from some severe disease, on rising from the recumbent or sitting, to the erect posture. Such facts prove that vertigo may be (as it no doubt often is) connected with a state of actual *anæmia* of the brain. The pallor of the face, and the weakness of the pulse, which commonly attend an attack of vertigo, are also in accord with this conclusion.

A large number of cases of vertigo are dependent on *gastric disorder*—dyspepsia in some form; whence the term “gastric vertigo,” or “*vertigo à stomache laso*,” as Trousseau styles it; and Dr. Joynes is inclined from observation of his own case (he having been formerly a great sufferer with this distressing affection), to think that the particular condition of stomach most apt to produce it is that in which there is a *development of gas* by fermentation, with more or less resulting flatulence. In his own case, the connection between this condition and the vertiginous attacks was unmistakable.

After giving some particulars of his own case, which at one time reached a degree of severity somewhat alarming, he proceeded to speak of the remedies from which he had obtained relief, and finally cure. For the immediate relief of the vertiginous attacks, he found *stimulation* (especially alcoholic) to be the best remedy—a small dose, say half an ounce or an ounce, of brandy or whiskey, not too largely diluted with water, generally causing the prompt disappearance of the dizzy sensations, which did not recur while the influence of the alcohol lasted. Other stimulants, such as ammonia, Hoffman’s anodyne, etc., he found less efficient. The remedy seemed to act in two ways: first, by causing the expulsion of gas from the stomach, which, however brought about,

always gave more or less relief to the vertigo. Secondly, the alcohol acted beneficially by steadying and *toning up* the circulation, and tranquillizing the action of the heart, which was often unsteady and fluttering during the attacks. Dr. S. Weir Mitchell has recommended *nitrite of amyl* as a stimulant in vertigo, and Dr. Joynes remarked that while he had never used it, he had no doubt it would prove highly useful in numerous cases. The great relief afforded by stimulants during the attack, he regarded as throwing important light on the pathology of this affection.

The permanent cure of the trouble in his own case, after the failure of various remedies, was brought about by the steady use for some time of *charcoal and magnesia*, which corrected the digestive derangement, and, in particular, the tendency to the development of gas in the stomach. He referred to the favorite treatment of Trousseau, derived by him from Bretonneau, viz., the administration of a powder composed of soda bicarbonate, magnesia, and chalk, after each meal, and a cup of infusion of quassia early in the morning. He had himself sometimes derived advantage from a combination of quinine, strychnia, valerianate of zinc and aloes. He also made brief reference to some other remedies which have been found useful in vertigo, such as ergot, bromide of potassium, valerian, etc.

Among the causes of this affection, Dr. Joynes ascribed a potent influence to *tobacco*, especially in the form of smoking. This agent acts injuriously, first, by poisoning the blood—introducing into the circulation a noxious principle which exerts a deleterious influence on the nervous system. Secondly, by deranging the digestive function, which it often does in a most serious degree. Thirdly, by enfeebling the action of the heart, and rendering it excitable and irregular. Dr. Joynes closed with a few remarks on Ménière's disease," or *auditory vertigo*.

Dr. Taliaferro (visitor) in response to call, incidentally remarked that he had used tobacco for three years without having had an attack of vertigo. Six months ago he gave up the use of tobacco, since which time he has had three or four attacks, although it is more than likely that these attacks were due to the sedentary habits he had indulged in for some time.

Dr. J. S. Wellford was satisfied that vertigo is frequently caused by the gouty diathesis, as it is also frequently the result of derangement of the stomach, and of cerebral anæmia. On several occasions, he has had vertigo after eating cheese

and drinking beer, while in Paris. The stomach, on these occasions, was filled with an acid gas, but all unpleasant symptoms passed away after free vomiting. Of course, too, vertigo often indicates serious cerebral trouble.

Dr. John G. Skelton fully agrees with Dr. Joynes that vertigo is often due to want of blood in the brain, and incidentally reported a case in point where the friends thought the patient about to die of apoplexy, and hence had his head supported. But the pallor of the face, the weak pulse, etc., indicated that the vertiginous spell was due to a directly opposite condition, and hence required the head to be low, the administration of stimulants, etc. Dr. Skelton is also satisfied that flatulence is a cause of vertigo. The over-distended intestine, pressing up the diaphragm, which then presses upon the heart, enfeebles its action and causes a sluggish, irregular circulation which results in vertigo. Many articles, when taken into the system, also cause vertigo. As an instance, the Doctor mentioned the case of a child who suffered severely from vertigo after eating the seed of Jamestown weed (stramonium). After a free vomit, the vertigo and other unpleasant symptoms passed off. Vertigo, when occurring during the course of a fever or acute disease, he generally considers as an alarming symptom.

Dr. R. T. Coleman remarked that we should not forget that vertigo is but a symptom. It not only results from wear and tear of mind, but of the heart also. It is common to those addicted to self-abuse, and also in women who try in every way to thwart the law of nature by making themselves abort. In regard to remedies, tincture of nux vomica and muriated tincture of iron combined, form an excellent combination for the vertigo due to wear and tear of mind and heart and self-abuse. In reference to vertigo due to centric causes, such as organic brain disease, cerebral softening, etc., nothing does so well as phosphorus, dilute phosphoric acid and strychnia. Eccentric causes, such as indigestion, flatulence, etc., should be treated by pepsin, combined with bismuth, carbolic acid, etc., along with strychnia to give tone to the intestinal mucous membranes.

Dr. W. W. Parker had noticed that the great majority of cases he had met with were due to gastric disorders and anæmia, and for whom he has chiefly used stimulants, which he has observed will tranquilize the heart's action under such circumstances, "tone up" the system and cause the trouble to disappear.

Dr. Joynes, *in regard to pepsin*, remarked that he had no

confidence in it if kept for any length of time, on account of its liability to spoil—it being an albuminous or protean compound. Some experiments made by him years ago taught him that the fresh stomach of the hog macerated ten times more actively than the pepsin from the shops.

Aug. 5th.—**Osseous Deposits in the Arachnoid Membrane of the Brain.**—Dr. Thos. R. Evans reported the case of a colored woman, aged 30 years, occupation washerwoman, admitted into the Alms House Hospital, July 9th, 1879, suffering with violent headache confined to the upper surface of the head, which had lasted for several weeks, and marked irregularity of gait in walking. She walked like a drunken person, and spoke slowly, though distinctly and rationally. She was not considered sick enough to be put to bed. The second evening after admission she had some fever, and died very suddenly.

Post-mortem appearances of the brain and skull three hours after death—made by Drs. Dais and Irvin, Resident Physicians. Nothing abnormal was seen after removing the calvarium, except a slight hernia cerebri, which protruded through the dura mater three lines, and was about the size of a small bean. This hernia was probably caused by removing the calvarium, there being adhesions of the dura mater to the internal table. This hernia corresponded with the upper surfaces of one of the anterior lobes of the cerebrum. Upon cutting through the dura mater, thoroughly ossified bones were felt, one corresponding in size and situation to the hernia. Three bones were found half an inch in front of the coronal suture; in the middle region, one small spicula was found near the torcular herophili. The brain was much congested, which, perhaps, was the immediate cause of death. The four bones together weighed 11.9 grammes, or 174 grains.

As is usually the case in the so-called ossification of the dura mater, the whole skull was much thickened, especially in the frontal region, and the vitreous table. There is hardly any trace left of sutures; and yet the patient did not appear to be older than 30 years of age.

There are four depressions in the vitreous table, which look worm-eaten, and are partially filled with carnified matter. Two of these depressions are over the seat of two of the bones. They vary in depth several lines, and one is more than a half inch long. Two of the others are about the size of a United States gold dollar, and the fourth about half that size. One of these bones is over an inch long, and a

quarter of an inch thick—*much thicker* than Rokitsansky states. They are rough on one surface and smooth on the other. No other parts of the body were examined.

Cataract Lenses—Dr. Joseph A. White exhibited two cataractous lenses which he had removed the day previously—one from a man 68 years old, who had been blind for fifty years; the other from a man 78 years old, who had been blind for nine years. The former lens had a small, yellow nucleus, and a large, whitish hard cortex; the latter lens had a very large, yellow nucleus, with no cortical substance. The first case showed the mixed form of cataract perfectly, the sharp distinction between the nucleus and cortex where both were hard, being probably due to the fact that the patient had zonular cataract when young, which gradually progressed to complete clouding of the cortex later in life. The second lens was an example of true senile cataract, with very large nucleus, yellow to its periphery. Both of these lenses were removed without mishap. But one of the cases was operated on without the use of chloroform; and as a result of the fright or mental shock became temporarily insane or delirious, talked incoherently, was hard to manage, and only recovered his senses about thirty hours after the operation, when he asked the Doctor if he was going to operate or not.

Solution of Quinia for Hypodermic Use.—Dr. M. L. James read the following formula for preparing sulphate of quinia for hypodermic purposes:

R. Quiniæ sulphatis.....ʒj.
 Acid. lactici.....min. xx.
 Aq. distillat., q. s.....ʒj.—M.

The lactic acid is recommended because it is less liable to act as an irritant and produce ulcers.

Hydro-Bromate of Quinia for Hypodermic Use.—Dr. J. A. White said that the use of hydro-bromate of quinia for hypodermic use was common in Baltimore. He had never seen it produce abscesses or local irritation. He had used as much as the equivalent of fifteen grains of quinia hypodermically at one time on one lady without any local irritation. The preparation is put up in Baltimore by Messrs. Andrews & Thomas.

August 19th.—**New Method of Operating for Varicocele.**—Dr. Isaiah H. White reported the following case in order to describe a new method of operating for varicocele: H. W., of the U. S. Navy, sought relief because of pain along the spermatic cord, and softening and atrophy of the testicle due to varicocele. The operation was as follows:

The vas deferens and spermatic artery being held aside, the scrotum is transfixcd by a needle armed with a silk ligature, as in Ricord's operation—the one used in this case being a sewing-machine needle, which has the eye near the point. As the eye of the needle emerges through the counter puncture in the scrotum, the loop of silk is caught, and through it is passed a loop of catgut, which follows the needle during its withdrawal. One end of the gut is then drawn through and liberated from the loop of silk, leaving the catgut thus transfixing the scrotum behind the veins. The needle is again passed through the same puncture and counter-puncture in front of the veins; one end of the catgut is caught in the loop of silk and drawn through as before. The veins are thus surrounded subcutaneously by a loop of the ligature, the free ends of which are left hanging out through the first puncture in the scrotum. The ligature is now tied, the ends cut short and returned into the scrotum and left to be absorbed. A similar ligature is then passed about an inch from the first.

At the end of three days, the patient was walking about his room, the testicles being supported by a suspensory bandage. On the seventh day, he returned to his ship, at which time everything seemed to be progressing favorably.

If future experience should demonstrate the success of this method, much will be gained in the time spent in waiting for the detachment of the ligatures in the other methods heretofore in vogue, which not infrequently amounted to several weeks.

In the *Lancet*, for October, 1877, *George Merrit* reported two cases treated by catgut; but in each case the ends of the ligatures were left long, twisted around a piece of quill, and tightened every day until detached. He does not state when or how the ligatures were detached. But from Dr. White's experience with the use of catgut where the ends of the ligatures are left hanging out, he should infer that the separation occurred at the point where the ligature quits the tissues to become external—the ligature itself parting at that point instead of ulcerating through the vessels. Hence it is better to cut them short at once and return them into the scrotum.

Operation for Ingrowing Toe Nail.—Dr. L. B. Edwards stated that he had recently seen in one of his exchanges—he thinks the *Medical and Surgical Reporter*—a description of a method of operating for ingrowing nails which is not usually known, but which is well worth remembering. At any rate, with Dr. John R. Wheat, Superintendent of the "Retreat for the

Sick," he had practised the method successfully on one sailor in his ward. The object is to cut off *deeply*, with a sharp bistoury or heavily curved scissors, the adventitious tissue which crops up on the side of the nail—thus leaving the nail to grow over and above the skin. Granulations on the cut surface may be kept down by powdering with oxide of zinc.

Tetanus.—Dr. I. H. White reported the following case successfully treated by *chloral*: In August last, he attended in consultation a case of traumatic tetanus in a butcher, caused by his stepping, while barefooted, on his heel upon a hook used for hanging up meat. Treatment consisted of enemata of one drachm of chloral hydrate dissolved in two fluid ounces of milk, repeated whenever pain or spasm returned. For three weeks, the patient thus took daily from 5ss to 5vj of chloral. The remedy acted pleasantly throughout the case—always allaying pain and spasm, relaxing the jaws sufficiently to take liquid food, and securing sleep. The repetitions of the enemata did not irritate the rectum nor cause any unpleasant effect. In the beginning of the treatment, calabar bean was used *per orem*, along with the chloral injections. Although this former remedy was pushed to the extent of half drachm doses of the fluid extract every three hours, none of its physiological or therapeutic effects were observed; and after a few days use, was discontinued—the chloral hydrate alone then being depended on. The large quantity of chloral used in this case without any unpleasant effect shows that it may and ought to be used in large doses in this disease to get its full benefits. In support of this view, the Doctor alluded to the case of a child, aged 12 years, reported in the *Practitioner*, who daily took over two hundred grains of chloral hydrate without any injurious effect. Calabar bean should also be given in large doses, if good is to be expected from its use in tetanus; as much as half drachm of the fluid extract should be administered to an adult every three or four hours. Holthouse reports a case in the *Lancet* in which three grains of the solid extract was administered every second hour; and on one occasion one dose of four and a half grains was given. Another case is reported where nine grains were given in as many hours without bad effect.

Dr. O. A. Crenshaw stated that some years ago he treated a negro with tetanus by calabar bean in doses usually recommended in the books. The spasms were so relaxed that on the day afterwards he was able to eat breakfast; but an hour afterwards, when the Doctor called, the patient was found dead.

Dr. L. B. Edwards remarked that Dr. Horatio C. Wood states, in his *Therapeutics, Materia Medica and Toxicology* (edit. 1876, pg. 313), that he has "been unable to find a recorded death from the disease after the free exhibition of the bromide [of potassium]. * * * * Not less than half an ounce of the salt should be exhibited in the day, and, at night, chloral should be used as a hypnotic." The disease is more easily excited in the negro than in the white; and there are also certain geographical sections where it is more common than elsewhere. Certain portions of Long Island are proverbially known as a part of this country where tetanus seems to be peculiarly liable to occur after traumatism.

That tetanus, as also trismus nascentium, are more frequent among negroes than whites was attested by the experience and observation of Drs. I. H. White, M. L. James, J. Grattan Cabell and J. S. Wellford.

Dr. H. D. Taliaferro has given two tablespoonfuls of tincture of calabar bean to a horse suffering with lock-jaw with the effect of curing the animal. The spinal region was also blistered.

Dr. W. W. Parker has used calabar bean with no good effect. He has more confidence in chloral than any other remedy.

Dr. L. S. Joynes remarked that the London *Practitioner* reported extraordinary success in the treatment of tetanus by chloral and morphia. He has seen these remedies do good in a case of trismus nascentium.

Sept. 2d.—**Incontinence of Urine.**—Dr. W. W. Parker, by way of opening the discussion, stated that while he was Physician to the Richmond Male Orphan Asylum, he found nocturnal incontinence of urine quite common among the boys. Failing to relieve the habit by medicines, he resorted to mechanical measures—such as placing a broad rubber band around the penis—which effectually stopped the unconscious discharge of urine. Often, however, they might be impressed, by fear and otherwise, in such a manner as to break up the habit.

Dr. F. D. Cunningham thought the question for the evening one of great practical importance, inasmuch as the infirmity under consideration often gave parents and doctors much trouble. We find the habit occurring not only with the irresponsible infant, but we also sometimes find it in boys and girls, up to the age of puberty, who deeply feel the shame attached to such a habit, and gladly render all possible assistance in breaking it up. Under these latter circumstances, we have certainly an abnormal condition of affairs; and here,

as elsewhere, it behooves us first to determine, if possible, the existing pathological condition, before resorting to remedies. Incontinence of urine in the young would, ordinarily, be found to exist under, or result from one of three conditions, except of course, where it is merely one of the symptoms of injury or disease of the great nerve centres. The first class of cases is that in which the habit resulted simply from faulty education in infancy and childhood, and would, of course, only be corrected by proper supervision and discipline exercised by parents or nurses. In a second class, the infirmity is due to reflex-nervous action affecting an over-sensitive bladder. The exciting cause here might be the character of the urine, intestinal irritation from worms, etc. Indeed, in many instances, an elongated or adherent prepuce might be the origin of the trouble, and cause the bladder to be unconsciously emptied when no longer under control of the will. In the third and last category would be found those cases where there is rather the opposite of the last condition; for in these there is a loss of nervous sensibility in the bladder which permits its undue distention first, and involuntary relaxation of the sphincter fibres afterwards without awakening the patient. In many cases, the differential diagnosis would be extremely difficult with all the means at our command; but bearing in mind the existence of the above conditions, we could generally come to some conclusion that would enable us to select some one of the class of remedies suitable to the character of the particular case instead of prescribing empirically, as is too often done. In discriminating between the second and third conditions, the *time* at which the patient wets the bed gives us a clew as to the pathological condition existing in each case. The accident occurs at any time; but is apt to commence in the first part of the night in the second class of cases; whilst in the third, it always happens towards the latter part of the night. Accepting the views of the pathology of this affection as briefly outlined in these remarks, one can understand the good results reported for the use of remedies of a most opposite therapeutic effect, such as opium, belladonna, chloral, and sedatives generally, and iron, strychnia, quinine, and tonics of various kinds, together with electricity, baths, etc. If we bear these in mind when called to such cases, our practice would have less of empiricism in it, as well as be followed by more speedy success.

Dr. M. L. James considers the use of tea and coffee at night a common cause of nocturnal incontinence of urine. At least, he is certain that some of his patients have been re-

lieved of the trouble after he has discontinued the use of these beverages.

Dr. L. B. Edwards opposed the use of bandages about the penis, because, if accidentally applied too tight, their use might cause such an injury as hypospadias. While practising in Lynchburg, he knew such a case—the boy, having been time and again whipped by his mother for wetting the bed, got in the habit at night of tying a string around the penis to prevent the flow of urine. One night he tied the string too tight, and as a result of the *vis a tergo*, rupture of the membranous portion of the urethra occurred. Another danger of bandaging the penis in the way proposed by Dr. Parker is, that of leading the child to masturbate. Children at a very tender age learn this habit; and frequently this habit may be traced to unnecessary handling or fingering the parts. Nurses well know the soothing influence upon infants and young children of fingering the parts, and not unfrequently are mean enough from some selfish motive to resort to this method of quieting a child. There can be no doubt that even infants possess a form of orgasm. Acton, indeed, is so convinced of the fact of infantile orgasm, and is so confident that the habit of masturbation may be caused by the pelvic congestion arising from whipping on the buttocks, that he protests against this method of punishing a child. Dr. Edwards thinks Dr. Cunningham's remarks should be constantly kept in mind. As for specific remedies, he was satisfied that for incontinence in healthy children, belladonna and chloral have a beneficial influence; in weakly children, the combination of iodide of iron is well approved. Potassium bromide also is recommended—especially where there is much restlessness due to dreaming, etc. Cantharides, in the form of tincture, is a good agent to be used in the incontinence of old age. Ergot is another good empirical remedy for nocturnal incontinence—especially in the aged. Of course known abnormal conditions of the system, as of the urine itself, should be relieved. Where there is spinal paralysis, of course no good is apt to follow any treatment until the spinal lesion is relieved. If there be intestinal worms, which are a frequent cause, use an appropriate vermifuge. If there be prostatic enlargement, treat that condition surgically. Abnormal conditions of the urine are frequently corrected by muriate tincture of iron, buchu, the alkalies, etc. Paralysis of the sphincters should be treated by strychnia, galvanism, etc.

Dr. J. Grattan Cabell thinks incontinence in old people

rather a symptom of disease than a disease in itself. In early childhood, care on the part of the mother will generally break up the habit. In young children, it is rarely due to debility—most frequently it is simply a habit.

Mr. H. Blair thought a uric acid diathesis a frequent cause of incontinence, by giving an irritating quality to the urine.

Diphtheritic Ophthalmia.—Dr. Joseph A. White stated that at the last meeting he reported a case of cataract—blind for fifty years—on which he operated. The lens was satisfactorily removed, and everything progressed favorably for the six days following the operation. On the morning of the sixth day, he found the corneal wound healed, the pupil clear, the conjunctiva and sclera of normal color, and vision equal to counting and distinguishing fingers at five or six feet, without a glass. He considered the case well enough to go home, and told him do so the following day, when he would send his glasses. The next day, however, the doctor was sent for to see him, with the message that his eye was inflamed. He found the lids swollen, red and hot; the ocular and palpebral conjunctiva inflamed and chemotic, with a discharge of thin, yellow, flaky serum. It was too late in the case to look for the usual sequelæ of a cataract extraction; and as the appearance of the eye was more like diphtheritic ophthalmia, he suspected inoculation with septic poison from an unclean sponge. On investigation, he found that one of the nurses had taken the sponge down to the general ward, and had unfortunately brought back others with which the patient's eyes had been cleansed.

Both eyes were affected—the one operated on being in a violent stage of inflammation; the other only slightly injected. Notwithstanding the most careful attention (for the Doctor remained with the patient until the next morning), and the use of appropriate remedies, such as local bleeding, ice compresses, mercury internally, and a weak mercurial wash locally, the cornea of the eye operated on began to slough within thirty-six hours, and the other eye was much inflamed.

It was a most unfortunate accident following upon a successful extraction, and one not likely to happen once in a thousand cases. But it serves to show the dangers to which an eye-patient is exposed in a general hospital; and how careful, if we must operate in such institutions, we must be in the most trivial matters appertaining to the after-treatment and nursing of such cases. The second eye attacked is now convalescing and will get well.

Dr. White had never before seen such an accident after a cataract operation, and, in fact, has rarely seen this form of conjunctival trouble at all, since he left Germany. In Berlin, he saw many cases; but it seems to be rare in this country. The symptoms are generally of a violent sthenic type (occasionally asthenic), with swelling, redness and heat of eye-lids, pain in eye, and around the orbit; thin, yellowish, flaky discharge from the conjunctiva, which is at first red and swollen, and then is covered by a whitish membrane, which is apparently on the surface; but if we attempt to remove it, we find it part and parcel, as it were, of the conjunctiva, which seems to be torn in the effort to remove the membrane, and is left bleeding. This stage soon changes into the purulent form; when the heat leaves the lids, the discharge becomes thick and creamy from breaking down of the characteristic membrane, and we are then dealing with the ordinary purulent ophthalmia. But the first stages of the two affections are very different—even where we have a membranous formation in connection with the purulent discharge. In diphtheritic ophthalmia, the lids are hot and the swelling tense; in purulent ophthalmia, the lids are red, but there is no increased temperature, and the swelling is doughy. In the diphtheritic trouble, the conjunctiva is swollen, yellowish-red, with a tendency to bleed, and to union between the eye-ball and lid; in the purulent, the conjunctiva is swollen, reddened like a granulating wound, with muco-purulent discharge, etc. The last stage of both is the same. The danger to the cornea is much greater in diphtheritic than in purulent ophthalmia, on account of the great thickening of the conjunctiva and the tense lids cutting off the corneal nutrition and causing necrosis. The treatment is antiphlogistic, as already stated, in the early stages; but when pus appears, astringents are to be employed.

In reply to a question of Dr. J. A. White, Dr. Cunningham said that, whilst he had seen the characteristic membrane of diphtheria on the conjunctiva in quite a number of cases, he could not recall any instance when it originated or existed solely on that membrane. Hence, he was skeptical as to the existence of a distinctly contagious disease that could be called diphtheritic ophthalmia. He looked upon the membrane as an evidence of the existence of a blood disease; and it would occur on any of the mucous membranes or orifices of the body, on blisters, wounds, etc. When the membrane was so prone to form on the various mucous membranes, it

argued badly for the patient's recovery, as the vital forces were always much reduced under such circumstances.

Sept. 16th. Hypertrophied Prepuce of a Clitoris.—Dr. Christopher Tompkins exhibited the clitoris of a colored woman which he had just removed, the peculiarity of which was the immensely hypertrophied prepuce. The skin, or mucous membrane, perhaps, more properly, was about an inch and a quarter long. The woman had tied a string around the end of the appendage, which looked like a penis; and this string was tied to another string which encircled her waist, and thus this large clitoridal appendage was carried by the woman. She said that it caused no pain, but was greatly in her way—especially when urinating and walking; hence, she kept it tied up as described. Extending some distance up the vagina, were fleshy columns which reminded him of the columnæ cornæ of the heart. The amputation of this growth was followed by severe hæmorrhage.

Nitrate of Silver Locally for Cystitis.—Dr. George Ross reported the case of a woman with chronic cystitis who was cured by the introduction into the bladder of a stick of nitrate of silver, which was thoroughly applied on two occasions. Before hand, there had been constant, intensely painful dribbling away of the urine. There was also retroversion of the uterus, which was replaced.

Dr. F. D. Cunningham, in one case of cystitis in a man, whose urine was loaded with ropy, tenacious mucus and pus, injected into the bladder one hundred grains of nitrate of silver dissolved in less than one fluid ounce of water. A grain of morphia was administered by the rectum before the bladder injection. The nitrate of silver was well retained without material discomfort, and the patient slept well for many hours, and his urine was normal when he awoke the next morning.

Tetanus Cured by Chloral and Potassium Bromide.—Dr. Geo. Ross also reported the case of a man who had tetanus as the result of a cut on the forearm by a piece of glass. Chloral hydrate, potassium bromide, and nutriment in large quantities were persistently given him every time he awoke. In addition, chloroform by inhalation was freely administered whenever the severe tetanic spasms came on, and acted charmingly. After the first five days, when one of the spasms had lasted for half an hour, one-fourth of a grain of morphia sulphate and one scruple of chloral hydrate were given. By this date, an eruption, which was thought to be due to the bromide, made its appearance, and anæmia was

feared. The nutriment, which consisted almost solely of milk, as also the medicine, were given on an average, every two hours. Within one twenty-four hours, the patient drank seven quarts of milk. All of the food and medicine were given by the mouth. During the three weeks of treatment, about three ounces of potassium bromide, about five ounces of chloral hydrate, and twelve and a-half grains of morphia sulphate, and three fluid ounces of chloroform were used.

Ligation of the Femoral Artery for Popliteal Aneurism.—Dr. Geo. Ben. Johnston reported a case of popliteal aneurism in a scrofulous negro man, about thirty years old. Last November, his horses ran away, and threw him from the driver's seat of a hack. Afterwards he noticed a pulsating swelling under his knee. Treatment by flexion of the leg upon the thigh was tried and failed. Then compression of the femoral by Esmarch's bandage and then by tourniquet was used, and failed. The tourniquet controlled the pulsations. After these failures, on August 7th, the femoral artery was ligated without difficulty just above the margin of the sartorius muscle. "Lister's antiseptic method" was used. After operation, the pulse in the wrist rose to 100, and the axillary temperature to 100.5° F. A few minutes later, the pulse fell to 90. Dressings were removed on the fourth day. The ligation came away on the twenty-fourth day. The non-pulsating tumor is now greatly reduced, and only about the size of a half guinea egg, cut longitudinally. The temperature was elevated for about thirty-six hours after the operation.

Oct. 7th. Dr. W. W. Parker, to open the discussion, reported a case of impotence caused by self-indulgence during the war, which was relieved by compelling the man to desist from his habit.

Dr. L. B. Edwards believes impotence, in many cases, due to mental over-strain. Frequently, under such circumstances, there was the mental desire; but the most tempting opportunities fail to cause erection, or else a discharge occurs before an entrance can be effected. Here is nervous exhaustion, just as occurs after physical over-work, or as the result of excesses in venery. The patient needs rest and repose. In such cases, the bromide for a few days, combined with phosphorus, and afterwards strychnia, restore the sexual power. If the impotence be due to local causes—general atony of the genital tracts, marked by mucus discharges that are so often improperly spoken of as belonging alone to spermatorrhœa, if there be no acute inflammation, there is no better remedy than cantharides. As an empirical remedy, when

there is general atony of the system, and especially marked in regard to the sexual organs, damiana is excellent if pushed in full doses, and for two or three weeks. After having used this agent in five or six cases, and always with benefit, it is proper to speak emphatically regarding it, since the *National Dispensatory* says "there is not the slightest reason for confiding in this statement of its virtues." Such an *ipse dixit* from so eminent an authority, unless contradicted or modified by practitioners who have recognized its virtues, would oftentimes deprive us of a useful remedy—especially when it is not known that damiana has any serious toxical effect, as have phosphorous, strychnia, cantharides, electricity, etc., when used except with the strictest circumspection as to other conditions of the system.

Dr. L. S. Joynes was glad Dr. Edwards had mentioned an old remedy, cantharides. Combined with muriate tincture of iron, he had seen it yield brilliant results. Impotence, in the majority of cases, is due to general causes—breaking down of the nervous system, or as the result of some severe disease. The indication is to restore proper tone to the whole system, selecting especially those agents which are known to invigorate the nervous system; and then, for its local action, use cantharides. The mucus discharges from the penis, in many cases, indicate a hyperæmia; the condition under such circumstances indicate the opposite of impotence. Cold hip-baths or douches, or sponging the spine with cold water, are also excellent tonics. A salt-water bath is most efficacious. Dr. Joynes has a suspicion that the use of tobacco in excess is another frequent cause of impotence.

Dr. Thos. R. Evans has no doubt of the effect of the use of tobacco in causing this condition. He has several friends who use it excessively for this special purpose, and with benefit, as they think.

Dr. Edwards believes the excessive use of tobacco, if carried to anything like the extent of producing "tobacco tremor," does lessen the virile power. But, on the other hand, when moderately used by those whom it does not otherwise injure, he believes it to be a stimulant to the sexual appetite. The same may be said of wine. Eating raw or fried oysters is also said to be a stimulant to the genital organs.

Dr. J. Grattan Cabell believes the majority of cases of impotence due to masturbation or sexual excesses—laying aside the impotence which comes naturally in old age, and that due to acute diseases. The doctor knew two muscular and robust-looking man, whose impotence was no doubt due to

early excesses. The treatment consists in correcting vicious habits, the use of tonics and nervous stimulants. Among the best of the latter is phosphorus.

Dr. H. M. Taylor said he was surprised that no mention had been made of a condition which he considered an active cause of impotence or sexual debility. He alluded to physiological and pathological changes in some portions of the urethral tract. These conditions, we find, are irritability, hyperæsthesia, inflammation and stricture. The intimate relation which exists between the urethra, the seminal vesicles, the ejaculatory and deferential ducts, and the testes affords a ready explanation why diseases of the urethra—functional or organic—should effect the functions of these neighboring and intimately associated organs. When the irritability, hyperæsthesia, inflammation or stricture—whichever it may be—is situated in the membranous or prostatic portion, its action is supposed to be exerted through a continuity of structure; if, on the other hand, it is near the meatus or on the glans, it is of a reflex or sympathetic nature. Gross reports 19 cases of impotence, in all of which he was able, with the bulbous bougie, to detect the presence of stricture. In fifteen of the cases, the stricture was the result of masturbation; in the other four, it resulted from the localization of gonorrhœal inflammation. Thus, we find masturbation leading to irritability, hyperæsthesia, inflammation and stricture—any one of which can render a man impotent. The pathological condition having been ascertained, the treatment suggests itself; the hyperæsthesia and irritability must be allayed, inflammation subdued, and the stricture dilated. All of us know how much urethral irritability subsides after two or three introductions of the sound; and all of us know how much impotent patients are benefitted by the occasional introduction of a sound; and all of us should know that this condition is often dependent upon deep-seated organic stricture, which require the bulbous bougie for their detection and dilatation, or cutting, before the impotency can be cured.

Oct. 21st. Hydro-Nephrosis of Both Kidneys.—Dr. M. L. James, in exhibiting these pathological specimens, derived from a recent patient at the City Hospital, remarked upon the usual gravity of the lesion, and the frequent and sometimes extreme difficulty of diagnosing the condition from other abdominal tumors. He saw the patient only two or three times during his life; but the following is the clinical history as recorded by the House Physicians:

“C. K., white male, aged 44 years, entered Hospital May

16, 1879, with ascites and œdema of lower limbs, distinct evidence of valvular lesion of the heart, with dilatation. He reported a tumor of the abdomen which, upon examination, proved to be large and fluctuating, occupying portions of the left hypochondriac, lumbar and umbilical regions—in the latter case extending to the neighborhood of the boundary between the lumbar and hypogastric regions. He was treated with diuretics, including digitalis, tonics, and nourishing food, under which treatment the dropsical transudations disappeared. The diuretics were then withdrawn. In spite of treatment, he slowly sank, and died June 29, 1879.

“The *post-mortem* examination revealed a tumor on the left side, which, to a casual observation, seemed to be a serous sac; but closer inspection showed it to be a greatly dilated kidney, containing between two and three quarts of pale urine, the ureter being also dilated to a considerable extent. The anatomical structure of the kidney seemed to be almost completely effaced. The pelvis of the right kidney was also dilated to a considerable extent, but not to a degree which attracted attention during life.

“The only pertinent points in his history ascertained was, that several years ago, while in company with others, attempting to lift a very heavy car from the track, he was so overcome by the exertion as to be obliged to stop work, and, for a few days, passed bloody urine. He soon recovered from the hæmaturia, but in a short time observed the existence of the tumors described. He had a second attack of hæmaturia about two years since from a similar cause, which soon, however, ceased. Excepting the occasions which have been mentioned, his urine had always been passed freely, and rarely with pain. The symptoms of the passage of a nephritic calculus had at no time existed.”

Dr. James called attention to the fact, that while the presence of the tumor in this case was appreciable in the lumbar region, upon careful examination, it was obvious and prominent in the central and anterior portions of the abdomen—a fact which can be well understood when we remember that its development to the rear was opposed by the firm resistance of the vertebral column, the diaphragm, and the psoas transverse, and quadratus lumborum muscles.

In the absence of any symptoms indicating the passage of calculi, and of all appearances of malignant disease, or tumor obstructing the channel of the ureter, Dr. James was well satisfied that the distension of the kidneys was due to obstruction of the ureters, by the formation of fibrinous co-

agula within them during the periods of hæmaturia—the obstruction having been sufficient to cause distension of the kidneys, but not sufficient to prevent entirely the passage of urine into the bladder, avoiding thus a fatal retention. If correct in this view, the Doctor thought the case established a form of trouble from fibrinous coagulation which has generally escaped the attention of physicians, and should awaken special concern in view of the increased frequency of hæmaturia in malarial and other conditions. In the present case, hæmorrhage from the kidneys was doubtless due to the venous congestion resulting from the cardiac trouble. Hæmorrhages from the pulmonary tissues, from the same cause, were well known to be frequent.

Attention was called to the grave consequences which might result in a case of hydro-nephrosis in a surgical operation, which, undertaken with a mistaken diagnosis, might cause a discharge of urine into the peritoneal cavity.

Without going into the detail of the differential diagnoses involved in deciding the question of the existence of this tumor, he would suggest, in hydro-nephrosis with a pervious ureter, a procedure which he was not aware had been heretofore employed for this purpose, but which was once employed by Mr. Estlin, of Bristol, England, in diagnosing a case where the ureter alone was distended, forming a tumor lower down, namely: Such pressure upon the tumor as would cause its contents to be discharged into the bladder, and thus temporarily dissipate the tumor. The same procedure might succeed where a tumor resulted from the accumulation of pus in the kidney—the microscope showing its nature, if the gross appearance of the urine did not distinguish pus in it.

He also suggested that the diagnosis of hydro-nephrosis might be assisted by the varying size of the tumor, occasionally likely to result from the spontaneous discharge of the contents, which would be liable to occur from the removal of an obstacle to the passage of the fluid through the channel of the ureter.

It had also occurred to Dr. James that the additional pressure of such a procedure might, perhaps, sometimes force an obstructing body from the channel of the ureter, and in that way stop further growth of the tumor; but in both these instances the pressure should be employed with becoming caution.

Nov. 4th.—**Infantile Typhoid Fever.**—Dr. R. T. Coleman was satisfied that such a disease existed long before there was any

literature on the subject, or rather when writers spoke of it as remittent fever, or else as a fever due to intestinal worms. He has seen the disease in children ranging from eighteen months to five years of age. It is marked by a daily double rise of temperature and corresponding remissions. Its critical days are the seventh and its multiple. The cutaneous abdominal eruption is much more common and marked than in the typhoid fever of adults. Besides, in the typhoid fever of children, diarrhœa is absent; and it is this absence of a usually prominent symptom in adults that makes the disease more or less obscure in children. This absence of diarrhœa in the typhoid fever of children is due to the fact that in them, up to five or eight years of age, Peyer's glands are rudimentary, and therefore do not suffer from the effects of the typhoid poison, as in the case of adults. It is a peculiar fact that typhoid fever of old people simulates very much that of children, although it is not so wanting in risk. Dr. Coleman regards typhoid fever as contagious, but as less so than scarlet fever. He believes the true cause why typhoid fever is not more frequent among adults is, that they had the disease in childhood. "Masterly inactivity" is the principle required in treatment. A nervine now and then, mild diuretics and occasional enemata. As the child grows beyond five years of age, the disease more and more resembles the fever as it affects adults; and by the age of ten years, it loses almost entirely its distinctive infantile form. He has never seen a patient under ten years old with typhoid fever die, which favorable result, he thinks, is due to the undeveloped state of Peyer's glands.

Dr. M. L. James remarked that in the absence of other distinctive symptoms during the attack, he had afterwards recognized the disease by the consequent alopœcia.

Dr. Coleman has not observed alopœcia to a great extent in children, nor in adults, except as the result of protracted cases.

Dr. W. W. Parker does not think typhoid fever common among children.

Dr. Coleman thinks that the common opinion that typhoid fever is necessarily a long continued fever, frequently confuses diagnosis. Adults, no doubt, generally manifest symptoms from the first; but children put the best foot foremost until they are compelled to give up. But whenever the fever in a child obeys the known laws of typhoid fever generally—two diurnal exacerbations and remission, and when quinine fails to break this fever, and where there is the rose-eruption—one

may generally be confident he has a case of infantile typhoid fever.

He believes *decaying timber* to be one of the chief causes of typhoid fever. In illustration, the Doctor mentioned a house in this city, built over a pile of decaying shavings, in which the inmates suffered for four years from the disease. After having the shavings removed, no more fever occurred. Again, during the war, his brigade occupied for sometime during the West Virginia campaign, a field where the trees had long been "belted," had in great part fallen down, and were far decayed. Next to his command another brigade camped in a body of living woods. Out of eight hundred and fifty men encamped in the "belted" woods, six hundred had so-called "camp fever"—really typhoid—whereas only five per cent. of those encamped in the body of living woods adjacent had the disease. Further, it will be remembered by the older physicians that many cases of typhoid fever occurred in this city immediately after the war, when material and labor were scarce, and when it was next to impossible to have houses repaired. He had no doubt this fever was due to decaying timber—especially in the basement floors. He instanced a number of cases which came under his observation to support this view.

Dr. John M. Payne thought Dr. Coleman's argument good; but in opposition to the views expressed, when he practised in Florida before the war, the place was filled with decayed timber; but he never there met with a case of typhoid fever, but plenty of malaria. Since he has been here, he has treated a number of cases of typhoid fever; and, differing from the general practice, he uses with benefit small doses—one-eighth to one-sixteenth grain—of calomel, guarded, if necessary, by opium.

Drs. Joynes, Coleman and Parker opposed this practice.

Dr. Parker said that when he commenced practising near Abingdon, Va., some thirty years ago, the disease was unknown in that Southwestern section of the State. During the war, he saw an epidemic of the disease in camp which he attributes to the upturning of the subsoil in making entrenchments, etc.

Dr. Coleman does not believe in the so-called "privy-propagation" of typhoid fever, unless the excreta of typhoid patients have been emptied in the privies.

Dr. Joynes believes this disease began in the North, so far as its history in this country is concerned. It was almost entirely unheard of in lower Virginia thirty years ago. He

never saw anything resembling typhoid fever when he commenced practice about forty years ago. Nor does he think he could have overlooked it, as he saw a good deal of it while attending medical lectures in Philadelphia. Some eight or ten years afterwards, the disease seems to have taken root in Virginia; for he had fourteen cases.

Dr. O. Fairfax had scarcely heard of the disease when he commenced practice—about fifty years ago. He has no doubt many patients have been purged to death by calomel, etc., before the disease was recognized. Still he was willing to admit that there is a big difference in the effects of small and large doses of mercury. Indeed, he has seen patients fatten on minute doses of bichloride of mercury.

Dr. John G. Skelton said the disease was a new one when he commenced practice in Powhatan Co., Va., in 1838. The old people called it “nervous fever.” The neighborhood was strictly malarial, and no doubt there were many cases of typho-malarial fever. In some instances he had traced outbreaks of the disease to subsoil exposure.

Diseased Ovary Removed.—Dr. F. D. Cunningham exhibited a diseased ovary, which he had removed while performing ovariectomy for the opposite ovary. The ovary first removed was mostly cystic, and weighed thirty-five pounds. The ovary now exhibited was removed at the same time, because it also was beginning to undergo cystic degeneration. Lister’s antiseptic method was used during the operation; but the “protective cloth” in the after-treatment kept the wound so constantly in a “sweaty” condition, thus delaying healing, that he removed this cloth, and pursued the practice common to Southern surgeons. The patient did well, was sitting up on the fourteenth day, and visiting on the twenty-third day; and on the twenty-eighth day attended the Virginia Agricultural Fair.

Analyses, Selections, etc.

Atropia for Acute Inflammation of the Middle Ear.—Dr. Samuel Theobald, of Baltimore, contributed to the July number, 1879, *American Journal of Otology*, a practical paper on this subject. His attention was directed to the use of atropia in inflammatory ear troubles several years ago, by an abstract from a foreign journal, seen, he thinks, in the *American Jour-*

nal of Medical Sciences. His experience since then has convinced him that atropia, though, for obvious reasons, not entitled to hold the same position in aural as in ophthalmic practice, is, nevertheless, an agent of much value to the aural surgeon. Although sometimes very useful in allaying pain dependent upon furuncular and diffuse inflammation of the external auditory canal, and possibly in favorably influencing inflammation itself, it is in the treatment of acute otitis media—that form of inflammation of the middle ear which is accompanied by severe pain, and commonly tends to the formation of pus—that it has proved most efficacious. Especially in the acute inflammation of the middle ear, resulting from colds, to which young people are peculiarly subject, and which is the usual cause of the familiar earache of children, is it useful, as well as in the more severe forms of otitis media, which follow the exanthematous fevers.

Dr. T's usual method of employing atropia has been to instil a few drops (eight or ten) of a solution of four grains of the sulphate in one ounce of distilled water, into the ear, the patient being directed to keep the head in such a position that the drops shall remain in the meatus, in contact with the drum-head, for ten or fifteen minutes. The instillations may be repeated, according to the severity of the symptoms, every three or four hours in very acute cases. He thinks a solution of twice the above strength might be employed with advantage where the pain is very severe and the tympanic membrane is intact.

In regard to the safety of using in this way so powerful a remedy, where the membrana tympani was imperforate, he has never seen any constitutional effect produced by the repeated instillation of a four-grain solution, the absorption being, as might be expected, very slight. In one instance, where there existed a perforation in each drum, with slight otorrhœa, dilatation of the pupils followed the application, two or three times a day, of a solution of this strength to both ears. The patient was a little girl three or four years of age, and it seemed more than probable that the mydriasis was due to the direct application of the atropia to the eyes, as she generally indulged in a cry when her ears were attended to, and was very apt to transfer her hands back and fourth between her ears and eyes. Nevertheless, he would not advise the incautious use of atropia where there existed a perforation of the drum, as in exceptional cases a sufficient quantity of the solution, by finding its way into, and possibly through the Eustachian tube, might be absorbed, to produce

serious consequences. It is true, that in the cases in which the use of atropia is indicated, this accident is but little likely to occur, because of the swollen condition of the mucous membrane lining the tympanal cavity.

One inconvenience to which the application of atropine solution to the ear is liable, should be mentioned. When the instillations are continued for several days, a papular eruption, troublesome, because of the itching to which it gives rise, very often makes its appearance upon the auricle, and less frequently extends to the outer portion of the auditory canal. The retention of the solution in the meatus by stopping the ear with a bit of cotton, has conduced to this result. It would seem better, therefore, to permit the drops to run out of the ear after they have been retained for ten or fifteen minutes; and, as a further precaution, the orifice of the meatus and the portions of the auricle exposed to the irritating action of the atropia might be anointed with cold cream or some other simple ointment. Where a perforation of the drum has occurred, especially if there be a copious discharge from the ear, sulphate of zinc, in the proportion of one to three grains to the ounce, may often be added to the atropia solution with advantage. It will be safest to begin with the smallest proportion named, as in acute otorrhœa astringents should be used with much caution.

The following cases may be mentioned: A little boy six years of age, convalescent from a recent attack of scarlet-fever, was taken in the middle of the night with a severe pain in the left ear. The upper and anterior portion of the tympanal membrane was deeply congested and the whole membrane dull and lustreless. Having made him use a gargle containing tincture of iodine and iodide of potassium, the Doctor warmed and dropped into the ear about ten drops of a four-grain solution of atropia. About one hour after this, as he was still awake, and the pain had not entirely disappeared, twenty-five drops of paregoric were administered. The atropia was still in the meatus, as he had not turned over since its application. Soon after this he fell asleep, and awoke in the morning free from pain. The redness of the drum-head had increased, however, and by 2 P. M. the whole membrane was intensely congested. The atropia instillation was repeated three times during the day, and the gargle used as often. There was no return of pain, and upon the day following, the congestion of the membrane was appreciably less, the treatment being the same. The next day the congestion had nearly disappeared, the bright spot began to re-

turn, and the hearing improved considerably, so that he could understand conversation in a whisper, the right ear being closed. The atropia was applied in the morning and at night only. Two days after this, the membrane having gained its normal appearance, further treatment was discontinued.

But for the atropia, a perforation of the drum with otorrhœa would in all probability have been the ultimate result. In how many instances might not a termination equally favorable be obtained, if only the opportunity for prompt treatment were afforded?

Post-Partum Hæmorrhage, Independent of the Placental Site.

Dr. Richard B. Maury, of Memphis, Tenn., in the *Transactions* of his State Medical Society for 1879, presents a very important paper on this subject.

Leishman, in his admirable *Midwifery*, recognizes only three causes of *post-partum* hæmorrhages, namely: utrine inertia, fibroids and inversion of the uterus. Hence, in treatment, "the object which, before all others, we have in view, is to promote uterine contraction; and if we fail in this, we fail utterly." All other authors as well seem to refer the etiology and treatment of *post-partum* hæmorrhage to the placental site as the source of hæmorrhage.

There is, however, a class of cases to which this treatment is not applicable, and a form of *post-partum* hæmorrhage against which it is of no avail. This hæmorrhage does not come from the cavity of the uterus, and it is entirely independent of the placental site; but it is not for that reason less serious at times than the usual form. It is really an intra-uterine hæmorrhage.

I would enumerate, in addition to the placental site, the following sources of serious, and, occasionally, even fatal hæmorrhage:

1. Lacerations of the cervix uteri, not involving the body or extending beyond the cervico-vaginal junction.
2. Lacerations of the walls of the vagina, or rupture of dilated veins at some portion of the vaginal walls.
3. Lacerations of the perineum.
4. Lacerations of the orifice of the vagina, especially in the neighborhood of the clitoris and vestibule.

If, then, the physician approaches the lying-in woman impressed with the idea that the only source of dangerous hæmorrhage is the cavity of the uterus, and that his main, and, indeed, only reliance, is firm uterine contraction, he may lose his patient by an oversight.

With a view of showing that the sources of hæmorrhage just mentioned are real, and that the dangers therefrom are not merely theoretical, the following clinical evidence is offered:

I. Under the head of Hæmorrhage from Laceration of the Cervix, a case which happened in my own practice in August, 1877, is first presented, and is given here in the words of my report before the Shelby County Society.

"The patient had a rapid labor, and the child was born as far as the hips before my arrival. Having removed the child and administered two drachms of Squibb's extract of ergot, I attempted to expel the placenta by the method known as Crede's. There was no hæmorrhage at all, and I was disposed to give the uterus full time to empty itself. After continuing the usual manipulations for fifteen minutes without success, one finger was passed into the vagina to see if the placenta could be reached. I found that it could not, and at the same time discovered a very marked laceration of the cervix on the left side. Pressure was continued over the uterus for fifteen minutes longer, and efforts made to induce it to throw off the after-birth. The patient meanwhile was quiet and comfortable, and there was no hæmorrhage. The uterus was firmly contracted, but all efforts to expel the placenta failed. At the expiration of thirty-five minutes from the delivery of the child, the patient's position was changed so as to bring the hips to the edge of the bed. Passing the hand into the vagina, and two fingers into the womb, I reached the insertion of the cord, and hooking the fingers into the placenta at this point, dragged it down so that a portion of its edge came without the os. While I was doing this, the patient made a violent effort to expel it, lifting her hips entirely from the bed. Hooking my fingers now into the edge of the placenta, it was easily removed, the patient again exerting herself more violently than before. The uterus was now firmly contracted, but blood flowed freely from the vagina in a continuous stream. It was bright red blood. The perineum was uninjured, the vagina was not torn, and it was clear to me that the lacerated cervix was the source of the hæmorrhage. The laceration, moderate at first, had been increased by the violent expulsive efforts of the patient, when the circular fibres of the cervix were in a state of contraction, so that one or more arteries were involved in the rent. Grasping the uterine body in the left hand, so as to steady it and insure its firm and continuous contraction, I passed pieces of ice into the vagina in contact with the cervix. Giving this

plan a fair trial, and finding it accomplished nothing, and seeing that the stream of blood continued unabated, and the patient was rapidly growing pale and faint, I passed a wad of old linen into the anterior *cul-de-sac* of the vagina, and by bimanual pressure brought the torn edges of the cervix in contact, and kept them firmly compressed. In a few minutes the hæmorrhage was checked, and in a little while it ceased. The pressure was kept up for half an hour, and the compress, after the lapse of an hour, was removed from the vagina.

"If the source of the hæmorrhage had not been discovered here, the case would soon have terminated fatally. As it was, the patient was blanched, greatly depressed, and made a narrow escape from death. The pulse ran up to 140 per minute, and was exceedingly feeble. Within forty-eight hours, febrile symptoms appeared and lasted for ten days, in consequence of a cellulitis on the left side, induced doubtless by the laceration."

This patient ultimately made a good recovery. The occurrence of the laceration was proved by an examination made in March, 1878.

The second case which is now reported was probably similar in its character to the first, but the circumstances under which the patient was seen precluded the possibility of any investigation into the source of the hæmorrhage. This case certainly comes within the category of *post-partum* hæmorrhages with a firmly contracted uterus, a class of cases which the distinguished Dr. Gooch wrote about, but the true nature of which he appears not to have understood, for he attempted to explain them by the theory that they were due to an over-distended circulation.*

Mrs. R., aged 25, third pregnancy, fell into labor at the eighth month, having ceased to feel foetal movements about six weeks before. Dr. Mitchell, summoned at daylight, found a leg presenting. The labor was rapid; the child was born with a caul, and the placenta, of course, was delivered with the child. Having removed the child and secundines, and administered ergot, the doctor took his seat by the patient and manipulated the uterus. He found it small and firmly contracted. Feeling assured, under these circumstances, that all was right, he was surprised in a few moments to hear from the lady that she was losing blood. He examined by touch, and finding no coagula under or near her, sup-

**British Obs. Jour.*, Dec., 1878. Source and Cause of Uterine Hæmorrhage during the Puerperal Period, by T. Snow Beck.

posed at first it was a trifling matter; but seeing that she grew pale, he passed ice into the vagina, the womb meanwhile continuing firmly contracted. Though the womb did not relax at all, the blood continued to flow. Dr. Willett, who lived near by, was now sent for, and arrived in a few minutes. By this time the patient's condition was alarming. A speculum was brought for the purpose of introducing a tampon, but the patient was pulseless, and too faint to allow the change in her position necessary for its use. The foot of the bed had been raised, and the patient's head lowered, and pledgets of cotton, saturated with a strong solution of the *liq. ferri persulphat.*, were now passed up in contact with the cervix. In consequence of the constricting influence of the styptic, it was found impossible to introduce more than four or five of these pieces, which could not be regarded as a tampon, but still the hæmorrhage was stopped. I arrived about one hour after the birth of the child, and twenty minutes after the introduction of the iron cotton. I found a firmly and continuously contracted uterus. The patient looked bloodless, but a feeble flutter could be felt in the pulse at the wrist. She complained of nausea and wringing in the ears, and every little while would say she was going to faint. No more hæmorrhage occurred externally, but in the course of the next hour I was satisfied that the womb had been perceptibly raised in the pelvis by the accumulation of blood in the vagina. Severe, almost constant, after-pains now set in, necessitating the administration of repeated doses of *laudanum*. These pains we thought due to the irritation of the womb by the styptic cotton. At 2 P. M. the patient was warm and the pulse restored, and the pieces of cotton were removed from the vagina. This removal was followed by a gush of dark fluid blood (about one pint in quantity), which had been pent up in the vagina. The after-pains stopped at once, and the patient fell asleep. From this time her recovery was steady, though very slow, in consequence of the loss of blood.

¶ An attempt was made, upon the removal of the cotton, to ascertain if any injury had been done the cervix or vaginal walls, which would account for the hæmorrhage, but the tissues were so changed by the iron that the results were negative. It was difficult to estimate the quantity of blood lost by the patient. It was found to have run through half a dozen pieces of thick quilt, which, in the shape of pads, had been placed under her. Her bedding also was wet, but to our surprise, no sign of the smallest clot could be seen.

One month after delivery, this patient underwent thorough examination, but nothing was discovered which would account for the hæmorrhage. This, however, is not very strange, when it is remembered how extensive are the injuries to the neck of the womb, which nature, unassisted, is able to repair. Besides, it is quite probable that during the passage of the head the walls of the cervix may undergo a laceration which does not involve the orifice, and which, therefore, cannot be recognized when involution is nearly or quite complete.

II. In illustration of the second sub-division of my subject—Laceration of the walls of the Vagina, or Rupture of Dilated Veins at some portion of the vaginal walls—the following cases are presented:

Four years ago I was asked to attend, in her approaching confinement, a lady who suffered from enormously dilated veins of the right leg and thigh, and corresponding labium majus. Upon examination, I found that the varix of the labium extended along the right vaginal wall quite to the cervix uteri. The formation of a thrombus in the labium during labor seemed very probable, from the greatly enlarged condition of the veins, and preparations for this accident were accordingly made.

Labor came on in due time, the child was soon born, and in a few minutes the placenta followed. The uterus contracted firmly and steadfastly; but very free, continued, and alarming hæmorrhage occurred. I examined for rupture of the labium, but could discover none. Examination of the vaginal walls by touch was unsatisfactory in the extreme. Speculum examination, under the circumstances, was impossible.

The vagina was packed with ice, but the hæmorrhage continued unabated. Compresses of cotton, saturated with iron, were then applied against the vaginal walls. These checked the flow, and in little less than an hour it was completely controlled. During all this time the womb was firmly contracted.

There can be no reasonable doubt that this hæmorrhage came from the rupture of dilated veins in the vaginal wall; and as every preparation had been made against hæmorrhage beforehand, no serious results ensued.

But it must be remembered that a dilated condition of the veins of the wall of the vagina is sometimes found in women who have no varices of the labium or other external parts. For instance, in November, 1877, Dr. Paul Budin, of Paris,

in a communication made to the Obstetrical Society of London, pointed out that profuse and even fatal hæmorrhage may take place from the vagina after parturition; and that the patient's risk is much increased if this be mistaken for *post-partum* hæmorrhage.* He stated that while lesions about the clitoris and perineum were easy to detect, that the bursting of distended veins in the walls of the vagina was less easy to diagnose.

He then proceeded to report three cases. In the first, the source of hæmorrhage was from the right lateral region of the clitoris, due to a laceration at that point. A flow of blood was observed by the side of the child's neck, immediately upon the escape of the head from the vulva.* In the second case, a stain of blood was seen on the child's shoulder and back, and he diagnosed a rupture higher up in the vagina. A few minutes after delivery an abundant flow of blood from the vagina took place. The placenta was delivered, and the uterus was firmly contracted, but the hæmorrhage continued. Examination revealed a rupture of varicose veins on both sides of the vagina.

The history of the third case was almost identical with that of the second. Linen compresses firmly pressed against the bleeding surfaces controlled the hæmorrhage in these cases.

Dr. Lombe Atthill, Master of the Rotunda Hospital, Dublin, reported to the Dublin Obstetrical Society, in April, 1877,† a case of fatal puerperal hæmorrhage, with a well contracted uterus. Although he regards the case as one of uterine hæmorrhage, satisfactory evidences of this are not given, and I am forced to believe the source of the hæmorrhage was extra-uterine, and probably from the vaginal walls. A half hour after the placental birth and the application of the binder, a slight but continuous stream of blood was observed trickling from the vulva. The binder was removed, and the uterus found to be "fairly contracted." The physician being summoned, injected ergot hypodermically, applied firm pressure, and a clot was expelled, but the blood still continued to trickle down as before. The hand was not introduced into the uterus, "because such a proceeding did not promise to be productive of good, for the uterus was fairly contracted, and it was quite evident that there were not any clots in it." Cold water was injected into the uterus, but without benefit, for the blood still trickled down as before.

The patient's condition was now alarming; her pulse could hardly be felt, and she complained of feeling very weak. In

**British Obs. Journal*, Dec., 1877.

†*British Obs. Journal*, Nov., 1877.

this state Dr. Atthill first saw her, just one hour and twenty-five minutes after the delivery of the placenta. He immediately injected the womb with a solution of perchloride of iron, one part to four of water. "This at once arrested the hæmorrhage, and no further loss occurred, though a watery discharge, small in quantity, was perceptible on the sheet."

The patient now rallied, the pulse returned, feet and body became warm, and she expressed herself as being comfortable. But after a lapse of twenty minutes, Dr. Atthill found her in a state of collapse, from which the hypodermic injection of sulphuric ether roused her but slightly. Transfusion was then resorted to, but without effect, and death speedily followed. The *post mortem* examination gave no clue to the source or cause of the hæmorrhage; but, strange to relate, no mention is made in the report of the autopsy, of the condition of the cervix, the vaginal walls, or the vaginal outlet.

Dr. Atthill regards this as a hæmorrhage from the uterine cavity, and ascribes it to "impoverished blood, due to the want of food, and to an exhausted state of the nervous system, the result of extreme mental depression." Making due allowance for such influences in the production of *post-partum* hæmorrhage, I take the position that they are entirely inoperative without the co-existence of uterine inertia. Dr. Atthill not only adduces no evidence to show that inertia of the uterus was present, but the entire record declares that the uterus was fairly contracted, and that this contraction was so firm that there was no excuse for an attempt at introducing the hand into its cavity. I cannot, under the circumstances, see the propriety of injecting the uterine cavity with perchloride of iron. The well contracted state of the womb, and the slight but continuous stream of blood which slowly trickled from the vagina, point to an extra-uterine source for the hæmorrhage.

III. In illustration of the dangers of hæmorrhage which may arise from laceration of the perineum, I will report, first, a fatal case which happened under my own observation eight years ago. The patient, a primipara, twenty-seven years of age, after a tedious labor, was delivered by her attending physician, with forceps. A laceration occurred through the sphincter and into the rectum. The placenta was expelled almost simultaneously with the child. During the delivery, I was at the patient's side, with my hand upon the womb. As the child was expelled, I followed it down with gentle pressure, and this pressure was continued after the expulsion of the placenta. The uterus was unusually small and well

contracted. Its contraction was continuous, as I well know, for I did not leave the patient's side, nor remove my hand from the abdomen. Imagine, then, my astonishment, after a little while, to see her face blanched, and to feel my knee, which was resting on the bed, wet with blood. She said nothing, for she had not fully recovered from the chloroform. The physician in charge at once used ice in the vagina, and the current of blood was, in a little while, stopped, but not until the patient was pulseless. All attempts to rally her failed. In two hours she was dead from loss of blood.

In this case, special attention was drawn to the persistently contracted state of the womb. It was observed and remarked upon, not only by the two physicians in attendance at the time of delivery, but by two others who had been called in during our efforts to revive the patient. This firmly contracted state of the organ continued up to the last moments of her existence.

I was perfectly satisfied that the hæmorrhage could not have come from the cavity of the womb, for its contraction was as firm and complete as it is ever observed to be after labor. The perineal laceration was a bad one, extending full two inches up the rectum. This was the source of the bleeding, which went on without our knowledge for fifteen or twenty minutes after the delivery of the placenta, while the patient was still under the influence of chloroform.

Examining the recorded experience of others upon this subject, I find very little. Obstetrical text-books say nothing, or almost nothing. In the *Transactions* of the New York Academy of Medicine for 1861, there is a paper by Dr. B. Fordyce Barker on "Anæsthetics in Labor." Speaking of a laceration of the perineum which happened in one of his forceps cases, while under the influence of chloroform, Dr. Barker says: "I may be pardoned for mentioning one extraordinary incident connected with this case. The patient came near dying from hæmorrhage, not from the uterus, but from the lacerated vessels of the perineum." In Dr. Barker's work on "The Puerperal Diseases," published in 1874, in the chapter on "Lacerations of the Perineum," there is a report of four cases occurring in Bellevue Hospital, in all of which the laceration was accompanied by troublesome hæmorrhage. In two of these cases the hæmorrhage was serious, amounting to a quart in one case, and to two quarts in the other.

In Dr. Barnes' work on "Obstetrical Operations," under head of Secondary Puerperal Hæmorrhages, it is stated that

"laceration of the perineum may become a source of secondary bleeding." It is not intimated by this author that hæmorrhage from this source may be fatal or even dangerous. Had I then known it might be so, we would not have rested in the blissful feeling of security that all was right because the uterus was well contracted.

IV. The fourth and last source mentioned from which hæmorrhage may arise after the birth of the child, is the Vaginal Orifice. This orifice, anatomically speaking, and the obstetrical perineum have no connection. "They are distinct parts, removed from one another by the structures forming the fossa navicularis," to use the words of Dr. Matthews Duncan, who brought the subject very clearly before the Edinburg Obstetrical Society in 1876. According to this writer, the vaginal orifice may be described as embracing those structures which lie external to the urethral orifice in front, the insertion of the hymen posteriorly, and the nympha laterally.

The lacerations of the vaginal orifice, according to Dr. Duncan, are inevitable in the primipara, and the lacerations of the anterior portion of this orifice often produce hæmorrhage, which is occasionally, but rarely, even fatal, especially if the tear extends to the clitoris.

It will be remembered that a case of troublesome hæmorrhage from the right lateral region of the clitoris has already been reported in this paper from Dr. Budin.

At the same meeting of the London Obstetrical Society, Dr. Edis, of the Middlesex Hospital, reported a case of hæmorrhage, which continued for eight hours after delivery. The patient was blanched, and the obstetric resident, having administered ergot in vain, was at a loss what to do. Upon examination, a rent an inch long was found under the clitoris, and an artery spouting. He failed to arrest the hæmorrhage by torsion, because of the bruising of the tissues. He then plugged with perchloride of iron, and applied pressure by means of a T bandage, which was kept in place thirty-six hours, a catheter being left in the urethra,

In answer to a question about the sloughing which perchloride of iron might produce, Dr. Edis replied that it was a question of saving life; the sloughing which followed was trifling in amount. I have presented facts enough to warrant the following conclusions:

1st. While giving special prominence to the rule to secure firm and continued contraction of the uterus in all labors, the obstetric practitioner should always have before him the

possibility of serious hæmorrhage, *post-partum*, from sources outside the uterine cavity.

2d. Whenever a free and continuous hæmorrhage arises after the delivery of the placenta, with the uterus so firmly contracted as to forbid the introduction of the hand into its cavity, it may safely be assumed that the source of the bleeding is not the uterine cavity, but one of the four points enumerated in this paper.

3d. The precise point of hæmorrhage should be ascertained by speculum examination, if practicable; but as such a procedure is often utterly impossible under the circumstances which attend *post-partum* hæmorrhage in private practice, the chief reliance of the physician should be styptics and pressure to the cervix and vaginal walls; and, in the meantime, close watch should be kept upon the womb, to make sure that its contraction is permanent.

Prescription for Dysmenorrhœa.—In a note in the *Transactions of the Ohio Medical Society*, 1879, we find that Dr. W. H. Mussey, of Cincinnati, during a discussion on dysmenorrhœa, stated the following formula, which he has found "very efficacious in the treatment of all forms of dysmenorrhœa:"

R. Pulveris guaiaci resinæ
Terebinthinæ canadensis.....aa ʒj
Olei sassafras.....ʒij
Alcoholis.....ʒviii

M. Macerate for seven days and then strain. Then add:

Hydrargyri chloridi corrosivi.....ʒj

Mix well, and Sign: Take twenty drops, in wine or sweetened water, every night and morning.

Sulphur for Diphtheria.—Dr. Wm. R. Wood, of Scotland Neck, N. C., in the *Transactions of the Medical Society of the State of North Carolina*, for 1879, reports in detail five cases of diphtheria successfully treated by the application of flower of sulphur to the site of diphtheritic manifestations—all of his cases being in the throat; and adds: "I have treated numerous other cases of diphtheria with sulphur in the last eighteen months—some very simple ones, whilst others were of a very grave and serious nature—and in no single instance thus far have I had cause to regret its adoption." His methods of applying the sulphur are either of the following: Put a teaspoonful of flowers of sulphur in half a wineglassful of flaxseed water, and by constant stirring, make as thick an emulsion

as possible. Apply this emulsion, as it were, by means of a soft linty mop to the diseased parts, leaving a pretty considerable coating of the sulphur on the surfaces. Or, instead of mopping, this sulphur emulsion may be gargled, or injected through the nasal passages. Or, what is still better when practicable, blow the dry sulphur through a reed or clean pipe-stem, or quill, directly on the diseased surfaces. Or lastly, fumigation by sulphur may be used. The sulphur should be thoroughly applied—whichever method of doing so is adopted—from three to eight times daily.

In connection with the application of sulphur as above described, the Doctor always uses other established remedies, such as muriated tincture of iron, chlorate of potash, etc.—which combination leaves us in doubt as to how much of his good success is due to the local use of the sulphur, and how much of the success should be accredited to the commonly accepted medicines.

Cure of Consumption by Benzoate of Soda.—Scarcely had the profession of America prepared to test the “Salisbury plan” of treating consumption—for which plan the most remarkable of favorable results have been claimed—than that we are startled by an announcement, in our foreign exchanges, that no less an authority than Prof. Rokitsansky, Jr., is credited with having discovered in the benzoate of soda a cure for consumption. The Cincinnati *Lancet and Clinic* of November 22, 1879, has so well compiled the facts that we avail ourselves freely of the labors of its editors in preparing this abstract.

In the *Wiener Med. Wochenschrift*, No. 39, 1879, the announcement appears that the inhalations of benzoate of soda are now going on in every room of the Vienna hospitals for the cure of tuberculosis.

The next number (40) of the *Med. Wochenschrift* contains the following note addressed to the editor:

GREIFSWALD, 30 Sept., 1879.

Hochgeehrter Herr:

In regard to the newly-discovered *wundermittel* discovered by Prof. v. Rokitsansky, in Innsbruck, for the cure of tuberculosis, the *natrum benzöicum*, I take the liberty of testifying that I first tried it in tuberculosis processes of the lower animals. My investigations regarding the genesis of scrofulous and tuberculous inflammations of the joints (see my preliminary communication in *Centralblatt f. Chirurgie*, No. 43,

1878, and No. 19, 1879), led me to the conviction that they depended upon a localization of the infecting substance in the artificially contused joints. Definite experiments convinced me that the micrococci contained in the tuberculous virus I selected for my inoculations, constituted the infecting substance, as was first pointed out by Klebs.

By a repetition of Klebs' breeding experiments, I could collect these micro-organisms, render animals tuberculous by means of them, and thus confirm entirely the statements of Klebs. A part of these, my breeding experiments, were conducted by one of my former pupils, Dr. Reinstädter, in association with me, and the results were published by him in his dissertation in the *Arch. f. Pathologie*, No. 11, under the title "Ueber Impftuberculose" (inoculation tuberculosis).

After these demonstrations, I commenced some therapeutic experiments; and selected first the benzoate of soda, aqua crocoti, and some other agents which are known to have an "anti-bacterian effect." It now occurred to me to study the effects of these agents on tuberculous affections of the joints. I soon discovered their very remarkable effects, and continued my investigations.

I communicated my first observations to our medical society here February 7th, 1879, and then published them in the *Arch. f. Experiment. Pathol. u. Pharmakologie*, vol. ii, p. 84. Since this time, I have been continually at work, and am now able to confirm all the statements made at first.

It was these observations that induced Prof. v. Rokitsansky to try the remedy, the benzoate of soda, on man. I rejoice that he has succeeded in obtaining the same results in man that I obtained in the lower animals; but I may remark that we have already made the same observations upon man here.

DR. MAX SCHULLER,

Privat docent Asst. Arzt der Chirurg. Universitäts-Klinik.

The *Weiner Med. Wochenschrift* appends to this letter the following remarks:

This matter is certainly important enough to excite further experiments, even if the cases in which the signs of "tuberculous cavities" disappeared so rapidly should turn out to be only bronchiectatic dilatations after emphysema and chronic catarrh, conditions far more frequently met in Tyrol than pulmonary phthisis, which is rare; for these diseases are also very obstinate to treatment and are often dangerous.

We are, moreover, in position to communicate a letter from Dr. Krocak, of Innsbruck, to one of his patients received a few days ago. The patient had seen in a daily pa-

per an account of the newly-discovered cure of tuberculosis, and addressed himself to the physician from whom he received the following response :

INNSBRUCK, 24 Sept., 1879.

Euer Wohlgeboren :

Our new method of treatment can only be conducted under medical supervision, and may not be properly described by letter. We use one part of benzoate of soda, in a five per cent. solution twice daily, to the thousand of the body weight, by means of a good atomizer, for seven weeks without interruption. With it, we enjoin the use of abundant satisfaction of the rapidly returning appetite with meat diet, fresh air, and abstention from all debilitating causes. You may get a good and tried apparatus at O. Kements, Apothecary at the "heil. Anna."

DR. KROCZAK.

We may add still further, continues the Vienna paper, that our druggists can hardly supply the demands for the benzoate of soda, as the use of it has surpassed all medical prescriptions. It is, indeed, bought up on every hand.

J. T. W.

Quinia and Amyl Nitrite in Pertussis.—Dr. F. D. Emaek, of Trackville, Pa. (in *Trans. Med. Soc. Penn.*, 1879), says that during the summer of 1877, his attention was attracted to an article by Dr. George Bayles of New York, in a Southern journal (*Va. Med. Monthly*, Aug., 1877) commending the use of amyl nitrite in conjunction with quinia in the treatment of pertussis. During the epidemic just then ending, Dr. Emaek had used all the old palliatives, such as belladonna, hydrocyanic acid, nitrate of silver, chloral, the bromides in conjunction with expectorants, etc., without doing any perceptible good in curing the disease. Since seeing Dr. Bayles' article, he has had eight cases of whooping cough in which he has used the amyl and quinia; and the results "prove, beyond the shadow of a doubt, the great merit of Dr. Bayles' method." He did not, in any of the eight cases, commence the amyl treatment until the characteristic inspiratory whoop was so thoroughly developed as to render a mistake in diagnosis impossible. When his directions were thoroughly complied with, the disease was invariably cured within a week; but in two of the cases, where vigilance was too early relaxed, the cough continued for nearly two weeks. Further, in none of the cases so treated, was there after the early use of the amyl, any of the usual complications, such as bronchitis, pneumonitis and cerebral convulsions,

which hitherto have rendered this disease, in a large proportion of cases, fatal. He believes, with Dr. Bayles, that "in quinia there appears to be a real antidotal action to the specific, root-element of the disease—whatever that may be." And he holds that the amyl nitrite "is pre-eminently a relaxer of spasm in all involuntary muscular fibre; and that, through its influence over the vaso-motor system, in allaying arterial tension and in producing peripheral deviation, it relieves any and all cerebral and spinal congestion, and thus controls the paroxysmal habit. Indeed, I consider the nitrite of amyl no less a specific in the treatment of pertussis than are the alkalies in rheumatism, or quinia in malarial fever."

The doses of quinia should be proportioned to the age of the patient, every two or three hours; and to deprive it of its exceedingly bitter taste, it may be combined with a grain or two of tannic acid, using simple elixir as a vehicle. The amyl is best administered by dropping one to four drops in a teacup; and as each whooping spell approaches, let the child inhale it. The paroxysm is broken as if by magic.

Another Symptom of Perinephritic Abscess.—During the recent session of the Tri-State Medical Society, Nov. 5, 1879, Dr. J. M. Holloway, of Louisville, Ky., read a paper on this subject. The symptom referred to is not mentioned by textbook writers. The symptom consists in a slight inclination towards the affected side, with a narrowing or lessening in width of the costo-iliac space. The last rib will often be found almost in contact with the upper border of the ilium. This is often, though not always, accompanied by more or less flexure of the thigh. He based his belief in the value of this point as a symptom upon his personal observation of twelve cases, in every one of which it was present. After the occurrence of suppuration, and the pus has been discharged, the lower ribs resume their normal position and relations.

Thymoline Soap is a soap designed especially for the antiseptic cleansing of physician's instruments. The soap contains a sufficient quantity of the disinfectant, and the odor of the thymoline is by no means unpleasant. In this day, when so much is said respecting the transmission of disease by surgical instruments, it will be a satisfaction to make use of an agent in cleansing them, which will, at least, assist in their disinfection.—*Chicago Medical Journal and Examiner.*

Book Notices, &c.

Publishers and Authors having complimentary copies of their publications for distribution, are invited to contribute such as they can spare to the library of the Richmond Academy of Medicine, where they will be brought to the attention of a large body of influential medical men. Dr. E. T. Robinson, Richmond, Va., Librarian, etc.

Pathology and Treatment of Venereal Diseases. By FREEMAN J. BUMSTEAD, M. D., LL.D., Late Professor of Venereal Diseases, College of Physicians and Surgeons, New York, etc. Fourth Edition, Revised and Enlarged, and in great part Rewritten by the author, and by ROBERT W. TAYLOR, A. M., M. D., Professor of Skin Diseases in the University of Vermont, etc. With 138 wood-cuts. Philadelphia: Henry C. Lea. 1879. Leather. Pp. 835—vi. (For sale by Messrs. West, Johnston & Co., Richmond.)

The first edition of this work, published in 1861, was the first comprehensive treatise on venereal diseases in any language which distinguished chancroid from syphilis—demonstrating the former to be a local affection, and the latter to be a constitutional disease. This distinction had been advocated with great earnestness and convincing power by Bassereau, in Paris, since 1852. And there are now only a few authorities—and they almost entirely of an old school, whose views on this subject will die with them—who do not recognize the essential differences. Dr. Bumstead's successful labors entitle him now to rank pre-eminently as *the* authority in this country on venereal diseases. But not only does this fact make his present treatise of interest to practitioners; the book is fully abreast with present literature on the subjects of which it treats, is extremely practical in descriptions of the several venereal diseases and modes of treatment, and hence should be in every doctor's library.

Diseases of Women. By LAWSON TAIT, F. R. C. S., Surgeon to the Birmingham Hospital for Women, etc. Second Edition, Thoroughly Revised and Enlarged. New York: Wm. Wood & Co. 1879. Cloth. 8vo. Pp. 192—xii. Price, \$1.50. (To Annual Subscribers, in Advance, \$1.)

This second edition of a popular work first published in England in 1877, has been specially prepared for "Wood's Library of Standard Medical Authors." The book embraces chiefly the results of the author's own experience. It is not, therefore, a systematic treatise of equal importance to the student to many that might be named; but as an *ad-*

ditional work on diseases of women, it will be found very valuable in suggestion and instruction. There are a number of omissions of reference to important subjects. "Battey's operation" is not even mentioned. Indeed, there is little in the recorded practice of Mr. Tait to show that he has an extended acquaintance with the practices of gynæcologists of this country, which has furnished to the world the greatest lights in this direction.

Atlas of Skin Diseases. By LOUIS A. DUHRING, M. D., Professor of Skin Diseases in the Hospital of the University of Pennsylvania, etc. PART VI. Philadelphia: J. B. Lippincott & Co. 1879. Royal Quarto. Price, \$2.50 per Part. (For sale by Messrs. West, Johnston & Co., Richmond.)

We have, in noticing each of the former Parts of this Atlas, had nothing to say adverse to the scheme or execution. Everything commends this Part VI as well. It treats of Syphiloderma (Pustulosum), Erythema Nodosum, Seborrhœa and Eczema (Papulosum). Each of these several sections of this Part is illustrated most handsomely by chromolithographs drawn from life; and these illustrations are beyond the possibility of excelling, so far as the delineation of cutaneous diseases on paper is concerned. The descriptive text is as graphic as the portraits; and the diagnostic and therapeutic suggestions are such as must be recognized as in every way authoritative. This Atlas is more than worth the cost to *general* practitioners especially; because, not usually being familiar with that literature which is now-a-days too generally given up to specialists, it enables them, by comparing by the eye the appearance of the eruption on their patients with these exact drawings, to arrive, with almost the promptness of a specialist, at a correct diagnosis, which diagnosis will generally suggest the treatment to be pursued.

Paresis of the Sympathetic Centers from Excitation by High Solar Heat, Long Continued and Suddenly Withdrawn, etc., So-Called Malaria—Its Etiology, Pathogenesis, Pathology and Treatment. By CHARLES T. REBER, M. D., St. Louis. Geo. O. Rumbold & Co. 1879. 12mo. Pp. 116. (By mail.)

We are sorry to say that we do not think this book worth buying. We have paid the author the compliment of reading it carefully; but had we not examined the preface, we would not have known the object of the book. From the preface, we learn that "the aim of this book is to establish

the truth in regard to the nature of the derangement of the human organism, usually described under the name 'malarial or malarious poisoning,' 'malaria,' 'palludal poisoning,' or 'marsh miasma.'"

System of Midwifery, Including the Diseases of Pregnancy and the Puerperal State. By WILLIAM LEISHMAN, M. D., Regius Professor of Midwifery, University of Glasgow, etc. Third American Edition, Revised by the Author. With Additions by JOHN S. PARRY, M. D. With 205 Illustrations. Philadelphia: Henry C. Lea, 1879. 8vo. Pp. 732. (For sale by Messrs. West, Johnston & Co., Richmond.)

"Leishman's Midwifery" has become so established in professional favor that it is needless to say more than that, "in the preparation of the present edition, such alterations have been made as the progress of Obstetrical Science seems to require." The work is extremely practical, and on every page shows a familiarity with the labors of others whose authority is recognized. So thorough was the work of revision of the second edition for the American profession done by the lamented Dr. Parry, that there was scarcely a need for another American editor. True, we find no mention of rachiotomy, as practised by a number of the profession of this country under certain contingencies, which was first proposed or practised by Dr. A. G. Tebault, of Virginia, nor mention of other facts which might have been embodied by an American editor. But it is idle to hope for a more perfect treatise than is the volume before us. Leishman's Midwifery is again most cordially commended to students, professors and practitioners for adoption as the standard work on Obstetrics.

Vegetarianism the Radical Cure for Intemperance. By HARRIET P. FOWLER, Danver, Mass. New York: M. L. Holbrook & Co. 1879. 12mo. Pp. 79. Paper. (By mail.)

This is the work of a woman, who writes with vigor, and at the same time, with a feeling that amounts to enthusiasm. She claims that in vegetable diet, and in the kind attentions to the wishes of a husband or son, we have the surest safeguards against drunkards. While there is much in the book that is worth reflection, and while the authoress presents facts in favor of a vegetable diet as opposed to animal food as a prevention or cure of intemperance which are not generally known, she argues entirely from one phase of the subject of diet. The test of experience is needed before we can speak of the proposed remedy as a "radical cure for intemperance."

Students Pocket Medical Lexicon. By ELIAS LONGLEY, Author of a *Pronouncing Vocabulary of Geographical and Personal Names*; of *Eclectic Manual of Phonography*, and of a Series of Phonetic School Books. Philadelphia: Lindsay & Blakiston, 1879. 16mo. Pp. 303.

An immense deal of valuable information has been condensed into this little "pocket edition." It contains the "correct pronunciation and definition of all words and terms in *general* use in medicine and the collateral sciences—the pronunciation being plainly represented in the American Phonetic Alphabet." The appendix contains "a list of poisons and their antidotes, abbreviations used in prescriptions, and a metric scale of doses." It is chiefly in botanical and chemical names that we find words not in Dunglison's and other dictionaries. The "American Phonetic Alphabet" is also given on the page facing the first lexicon page. We cannot say that this "Lexicon" meets the wants of any large number of the profession. For to those who study medical pronunciation, the work is not sufficiently complete to serve their purposes; while to those who care but little for orthography and pronunciation, neither this nor any other work of the kind will be consulted. But the effort is in the right direction; and the labor here done will greatly lessen that of future medical lexicographers.

Sexual Neuroses. By J. T. KENT, M. D. St. Louis: Maynard & Tedford. 1879. 12mo. Pp. 144.

The author has done a good service to the profession in presenting this little volume. A false modesty, or the fear of unpleasant criticism, has too much prevented the proper study of the "sexual neuroses." We look upon every contribution to the subject that is not published for quackish ends as something of importance. Each practitioner in his experience has seen some one or more patients whose ailments have seemed to him attributable to sexual excesses, on the one hand, or to sexual abstinence on the other. Yet, such is the limited systematic observation of any one physician regarding these classes of patients; and when he turns to his books, or consults with his *confrère* about such cases, he obtains so little assistance that he scarcely is certain of what he has witnessed.

This book shows the result of much research; and the author presents his facts plainly, and deduces conclusions which, in the main, commend themselves to the favorable consideration of the reader. The volume has none of the character-

istics of a sensational publication; nor is it intended for the laity.

Diseases of the Stomach—The Varieties of Dyspepsia, their Diagnosis and Treatment. By S. O. HABERSHON, M. D., Lond., Senior Physician to, and late Lecturer on Principles and Practice of Medicine, at Guy's Hospital, etc. Third Edition. Philadelphia: Lindsay & Blakiston. 1879. 12mo. Pp. 324. (From Publisher.)

This is an exceedingly valuable, practical work, written by a distinguished and able author, on morbid conditions of the stomach, which are met with every day. He has borrowed freely from his larger work on "Diseases of the Abdomen," whenever he thought it a benefit to the reader of this book to do so. The chief object of the present publication is to assist the physician the better to understand the meaning of the various forms of dyspepsia, and thus enable him to apply the appropriate remedies to cure the patient. The chapter on the "symptoms of disease of the stomach," and the one on the "general treatment" of stomach diseases are specially important, and are the keys to all the rest of the book.

The Treatment of Diseases by the Hypodermic Method. By ROBERTS BARTHOLOW, M. A., M. D., LL. D., Professor of Materia Medica and General Therapeutics, Jefferson Medical College, Philadelphia, etc. Third Edition. Philadelphia: J. B. Lippincott & Co. 1879. 12mo. Pp. 249. Price \$1.50. (For sale by Messrs. West, Johnston & Co., Richmond.)

It has been a frequent charge or criticism regarding the author's publications that he looks too much abroad for facts which could have been obtained more readily from home journal original literature. And it may furthermore be a fault of his publications that there is too much of the *ego* in them—so far as living authors in this country are concerned. But whatever complaints of this kind may be hinted at, there is no denying the fact that his books are all practical in their teachings, and hence useful to physicians. The general plan of this manual of hypodermic medication is unexceptionally excellent—notwithstanding a few omissions of reference to some facts which have been going the rounds of the American medical press; and which, after they find a place in foreign literature, will then be again quoted in this country as authoritative, and the credit accorded to foreign writers or observers.

Part II is taken up with "special therapeutics," and treats of the hypodermic administration of morphia, atropia, duboi-

sia, strychnia, conia, curara, nicotia, hydrocyanic acid, eserine, pilocarpin, chloroform, chloral hydrate, caffeine, apomorphia, ergotin, quinia, carbolic acid, mercury, arsenic, aquapuncture, and irritant injections. The physiological and therapeutic effects of each article named is described, and the manner of using them. No one book in America at present published can take the place of this manual.

American Health Primers. (a) **Summer and its Diseases.** (b) **Eye Sight, and How to Care for It.** (c) **Winter and its Dangers.** Edited by W. W. KEEN, M. D., Fellow of the College of Physicians of Philadelphia, etc. Philadelphia: Lindsay & Blakiston. 1879. Each of above, 16mo. Cloth. Price 50 cents. (For sale by Messrs. West, Johnston & Co., Richmond.)

(a). The first named of these "Health Primers" is an instructive as well as an entertaining little book of 160 pages, by *James C. Wilson, M. D.*, Physician to the Philadelphia Hospital, etc. It is written without technicalities, and is intended for lay readers. And we most cordially commend it as containing lessons which are easily learned and may save many lives. The "Rules for the Management of Infants during the Hot Season," given on page 92, are worth to every parent much more than can be repaid.

(b). The second of the Primers, whose title is given above, is the fourth of the series, and is by *George C. Harlan, M. D.*, Surgeon to the Wills Eye Hospital, etc. It contains 139 pages of reading material of intensest interest to every one. While Dr. Harlan is apparently writing about that which seems to be rudimentary, he is in reality imparting most easily information regarding some of the most complex of the phenomena connected with the special senses.

(c). We have not received the fifth of the series of Primers as published. Hence we come next to the sixth volume—"Winter and its Dangers," by *Hamilton Osgood, M. D.*, on the Editorial Staff of the *Boston Medical and Surgical Journal*. It has 160 pages of reading, which becomes a treasure of learning to every family which allows itself to put the lessons to the practical test.

These "American Health Primers," being issued monthly, are intended specially for the laity. The value to families of each of the five volumes we have examined cannot be well overstated. It does not require scarcely more than an evening for the head of the family to read through each of them; and as he or she reads, it may be confidently promised that the party will become more interested, and will become a

more intelligent patient or nurse, and will prove of future assistance to the physician. We most heartily commend the series—50 cents a volume, or the series of twelve volumes at \$5, if paid for in advance.

Guide to the Examination of Urine, with Special Reference to the Diseases of the Urinary Apparatus. By K. B. HOFFMAN, Professor at the University of Gratz, and R. ULTMANN, Docent at the University of Vienna. From Second Edition. Translated and Edited by F. FORCHHEIMER, M. D., Professor of Medical Chemistry at Medical College of Ohio, Cincinnati. With Illustrations. Cincinnati: Peter G. Thomson, 1879. 12mo. Pp. 195. Price, Cloth, \$1.50; Leather, \$2. (From Publisher.)

We must assign to this production an inferior position among the numerous works professing to be guides in the examination of urine. Its defects are numerous. The press has not been sufficiently watched, so that there are frequent slips in spelling, while, by reason either of carelessness or ignorance, there are many unpardonable faults in punctuation. The chemical nomenclature adopted is, to a considerable extent, peculiar, and besides being inconsistent with that of our recognized authorities—which is of some consequence—is often inconsistent with itself—which is of more consequence. Moreover, the descriptions of the methods for estimating the constituents of urine are by no means sufficiently explicit to meet the needs of those for whom the work was prepared. It is but fair to say, however, that there is a good deal of useful information scattered here and there through the volume. Still, as a guide, it will doubtless be found more satisfactory to those who know the way already than to those who don't.

W. H. T.

Editorial.

Suits for Malpractice.—At a regular meeting of the Baltimore Medical and Surgical Society, the following preamble and resolutions were unanimously adopted:

Whereas, there have occurred of late several instances of unjust and unwarrantable prosecutions of members of the medical profession for alleged malpractice, with the evident intention of mulcting them for damages, we deem it advisable, for the protection of the profession, to urge upon them not to lend aid or countenance in any such efforts by unguarded expressions of opinions; and therefore be it

Resolved by the Medical and Surgical Society of Baltimore, That as physicians and surgeons, we will not aid, abet or encourage any proceeding favoring suits for malpractice against members of our profession who are in good standing.

Resolved, That we will uphold the dignity and honor of the profession under all circumstances, and support and sustain its members when shadowed by unjust demands, or assailed by unworthy asseverations.

A. B. Arnold, M. D., Thos. B. Evans, M. D., J. J. Caldwell, M. D., Committee.

F. J. Ward, M. D., Recording Secretary.

Walsh's Physician's Combined Call-Book and Tablet for 1880, and Walsh's Physician's Handy Ledger for 1880, are now ready; and so important are they to every practitioner who keeps a visiting list and ledger, that we feel that this prominent notice of these books is of importance to our subscribers. We do not know of their superiors for the purposes indicated by their titles. Price of Call-Book and Tablet, \$1.50 prepaid; of Handy Ledger, \$3 prepaid. Address Dr. Ralph Walsh, 320 C street, Washington, D. C. Both of these books have been in use for the past year by most of the practitioners in this city; and as yet we have heard no word regarding them except in almost unqualified commendation.

Hancock's Lozenges.—We call special attention to the advertisement of Mr. John F. Hancock, pharmacist, of Baltimore. His "aromatic liquid pepsine" and his lozenges, prepared after the formula of the London Hospital for Diseases of the Throat, are especially to be commended to the medical profession. Indeed, any of the preparations emanating from this house may be relied on as fully representing their named constituents. Messrs. Meade & Baker, of this city, are his agents, and can supply the profession.

The Alienist and Neurologist—a quarterly journal of practical and scientific psychiatry and neurology—will be begun about January 1st, 1880, in St. Louis, Mo. Dr. C. H. Hughes, 1313 Chouteau Avenue, editor. Price, one year, \$5. The plan of the enterprise commends itself to every practitioner; the ability of the editor is well known throughout the country; and the industry of the publisher—Mr. Ev. E. Carreras, corner 2d and Locust Streets, St. Louis, Mo.—encourages the hope of permanent success.

The Richmond and Louisville Medical Journal has discontinued its publication in Louisville, Ky., but will hereafter be issued from the *new* home of the senior editor, Dr. E. S. Gaillard, New York city—27 Clinton Place. The publication of the *American Medical Bi-Weekly* will also henceforward be issued from the same city. We sincerely hope that this change will result in good to the journals, which, in days past, Dr. Gaillard has so ably edited. “Dr. D. L. Gaillard having withdrawn from the journals, communications will be addressed to Dr. E. S. Gaillard alone” at his new home, where he has many friends.

The American Public Health Association.—The *Louisville Medical News*, of November 22d, says the “meeting at Nashville, which adjourned Thursday, * * * proved a grand success.” The meeting for 1880 will be in New Orleans.

Nurses of Boston.—The *Boston Medical and Surgical Journal*, of November 20th, announces that “any one requiring a nurse, whether male or female, for cases of illness, can obtain one, with full information as to character, qualifications, charges, etc.,” at the Medical Library Building. “Applications from the country, by letter or telegram, will receive prompt attention.” The directory will be open day and night. “A charge of \$1 from 8 A. M. to 8 P. M., and \$2 from 8 P. M. to 8 A. M., will be made to any person securing a nurse.” Some such central bureau for nurses would be a good thing to establish in every city.

Dr. Henry C. Chapman, late Demonstrator of Experimental Physiology, etc., will lecture on Physiology at Jefferson Medical College, Philadelphia, during the remainder of the term made vacant by the death of Prof. J. A. Meigs.

Donation to Manhattan Eye and Ear Hospital, New York.—Hon. E. D. Morgan has recently given \$25,000 to this institution, which removes the building site (41st St. and Park Avenue) from debt.

Terrible Case of Arsenical Poisoning.—The *American Journal of Dental Science*, November, 1879, tells of one of the most unfortunate and tragical terminations by the possibly careless use by a dentist of arsenious acid in a decayed tooth, which recently occurred in Brooklyn, N. Y.

Bellevue Hospital Medical College, New York.—After the 1879-'80 session, the plan of instruction apportions to each one of the three sessions, certain divisions of the study of medicine, with final examinations in elementary branches at the end of the first and of the second session. The examinations for graduation are to be at the end of the third session, and confined to practice of medicine, surgery and obstetrics. Here is a move in the right direction.

The Detroit Medical College, beginning at session 1880-'81, will require preliminary examination of all matriculates; and the studies will be graded by the year for three years.

The Medical Department of Yale College, has also increased its course to three full years.

Also the *St. Louis College of Physicians and Surgeons*, recently established, will have a high grade of medical education.

Obituary Record.

Dr. Robert F. Baldwin, late Superintendent of the Western (Virginia) Lunatic Asylum, at Staunton, Va., died of cancer of the face November 8th, 1879. His disease developed about eighteen months ago, which compelled him to resign the position he held in the Western Lunatic Asylum some month or so prior to his death. As the successor of the venerable Stribling, in the Asylum, he conducted the institution with marked ability, leaving a blameless record and a reputation for kind deeds and professional ability that will not soon perish. He was a member of the Medical Society of Virginia; and in the other medical organizations of which he was a member, he also constantly manifested a lively interest. He was about fifty-five years of age at the time of his death.

Prof. James Aitken Meigs, Professor of Physiology and the Institutes of Medicine in Jefferson Medical College, Philadelphia, Pa., died at his home in Philadelphia, November 9, 1879, in the fifty-first year of his age. The *Philadelphia Medical Times*, of November 22d, 1879, contains a most excellent notice of the life and labors of the departed.

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Original Communications.

ART. I.—**Sutural Re-Union of Divided Nerves.*** By WILLIAM C. DABNEY, M. D., Charlottesville, Va.

Until comparatively recently no attempt has been made, so far as I am aware, to unite the two ends of a nerve which had been divided some time previously. Indeed, it has been considered by many surgeons a very questionable practice, to say the least, to unite a divided nerve by sutures at the time of division. Verneuil took strong ground against it only a year or two ago. It is advised by Gross to use sutures when necessary to keep the ends in apposition in those cases where the nerve has just been cut, but it is very rarely, if ever done.

It is not to this class of cases, however, to which I propose to call your attention now. No doubt, almost every physician in active practice occasionally sees cases in which one of the large nerve trunks is divided, and in which paralysis of certain muscles results in consequence. Until the last four or five years, these cases were considered utterly irremediable, and were among the opprobria of the art.

Mr. Althaus justly remarked at a meeting of the Clinical

*This paper was read before the Medical Society of Virginia, on October 22 1879, during the Session in Alexandria. But by permission of the Committee on Publications, and at the request of the Editor, it has been contributed to the *Medical Monthly*.

Society of London, in May last, that the sutural re-union of nerves (which had been divided sometime previously), with restoration of function in the paralyzed parts, was one of the most important of the recent advances in surgery.

I propose to study the subject in the present paper; and for greater convenience, will consider it under the following headings:

1. The changes which occur in the two ends of a divided nerve after division, and the time of their occurrence.

2. The changes which occur in the parts to which the nerve is distributed.

3. The proximity of the two ends necessary for union to occur.

4. Nerve stretching as an aid in certain cases.

5. The length of time after division of a nerve when sutural re-union may give satisfactory results.

1. The changes which occur in the two portions of a divided nerve have been very carefully studied, but there is still much diversity of opinion on the subject. Waller, so long ago as 1850, observed that when a nerve was divided, its distal portion "always underwent atrophy, wasting and degeneration." (*Philosophical Trans.*, 1850, Part 2d.) Sir James Paget, in 1853, after quoting the observations of Waller, stated that "the change in divided nerves, begins at the distal extremities of the nerve fibres, and gradually extends upwards in the branches and trunk of the nerve; but is repaired if the divided portion of the nerve is allowed to reunite." (*Surgical Pathology*, p. 104.) The degenerative changes occur very much more rapidly in the lower animals, which are generally used for experiment, than in man.

In a very carefully prepared paper, on nerve degeneration and nerve regeneration, by Dr. Hermann Eichorst, which appeared in *Virchow's Archiv.*, for January, 1874, the writer refers to the fact that nearly *seventy* essays have appeared on the subject since 1849. In nearly all of these, the nature of the degenerative change is considered to be a fatty metamorphosis. It is needless to go into any detailed description of the microscopic appearances of the nerves at different periods; suffice it to say that the axis cylinders seem to resist the de-

generative changes much longer than the other component parts of nerve fibres. Vulpian has found the axile filament present six months after division of the nerve; and Charcot states that they remain almost indefinitely. (*Lecons, etc.*, tome I, p. 35.) Schiff entertains a similar opinion. There can be no doubt, I think, that until very recently the effects of nerve section and of nerve irritation have been generally confounded, and this is, perhaps, still true to a very considerable extent.

Charcot, who has done more perhaps than any one else to elucidate this subject, says that after *division*, the electric contractility of the muscles disappears gradually but very slowly; and that it is "only abolished after some months, and not within fourteen or fifteen days, as is the case when the nerves are subjected to irritation." (*Lecons, etc.*, tome I, p. 57.)

It is highly probable, from the observations of Paget, and those of Dr. S. Weir Mitchell—to be mentioned hereafter—that the peripheral nerves may be regenerated, even when there has been considerable degeneration; but no limits can be assigned in this matter.

2. Another point which has a direct and very practical bearing on the re-union of nerves which have been divided for some time, is the changes which occur in the parts to which they are distributed. This is especially true with respect to motor nerves; for if the muscles are so much altered in structure that they can no longer perform their function, it would be manifestly useless to unite the two ends of a nerve even were such re-union possible.

There has been much difference of opinion with respect to the changes which occur in the muscles after the division of their motor nerve. The trouble has been that lesions caused by division, and those caused by irritation have been confounded.

There can, however, be no doubt, I think, that the only lesions of muscles as a consequence of division are due to their prolonged inaction. Schiff has reported a case in which the electric contractility was perfectly preserved fourteen months after division of the nerves (*Lehrbuch der Physiologie des Menschen*, p. 18); and I have myself seen a case in which it

was only slightly diminished six months after an excision of a portion of the median nerve. We shall see hereafter that even if the electric contractility be *very greatly* lessened, the case is not hopeless. Occasionally inflammatory troubles have been observed about the joints as a result of their prolonged disease; but such accidents are rare in the human subject, unless there be some injury at or near the joint.

Should it be deemed necessary, a small piece of the muscle may be removed by the harpoon, and examined under the microscope. When we come to examine the reported cases of re-union of nerves, we shall find that the muscular irritability and development has been observed to increase after the two ends of the nerve had united.

3. With respect to the distance at which the two ends may be from each other, we find a very essential difference between the teachings of physiological experiment and of clinical experience. Bilroth (*Surgical Pathology*, p. 101) says that if the two ends be more than three or four lines apart, union will not occur; and Gross expresses a very similar opinion. (*System of Surgery*, vol. I, p. 636)

In the course of a discussion on the subject, at a meeting of the Clinical Society of London, last May, Mr. Althaus stated that, if the interval between the ends of a divided nerve was more than one-fourth of an inch, re-union would occur by fibrous tissue. It is astonishing to find such a view entertained by one so well versed in all that pertains to affections of the nervous system as Dr. Althaus, in the face of well attested facts, to the contrary.

In the *American Journal of Medical Sciences*, for April, 1876, Dr. S. W. Mitchell, of Philadelphia, reports three most instructive cases of neurotomy—one of his own, and two of Dr. Hodge's. In one case, one inch of the musculo-spiral nerve was excised and regenerated; in another, one inch of the digital branch of the ulnar on the fourth finger; and in a third, two inches of the radial nerve were removed and regenerated—the regenerated portion measuring in this case, when subsequently excised again, one and a fourth inches. In commenting on these cases, Dr. Mitchell says, "they prove how difficult it is, especially in young people, to pre-

vent the re-union of cut nerves, and how perfect may be that repair."

I should have stated that a most careful microscopic examination, made by Dr. Bertolet, showed that the regenerated portion in every case was genuine nerve tissue, and that the sections were indistinguishable from those obtained from a perfectly normal nerve.

4. It is of course desirable, however, to bring the ends as nearly into apposition as possible; and, when necessary, *nerve stretching* may be resorted to with this view.

We shall see hereafter that in one case at least the nerves have been stretched in order to approximate their ends; and it will be advantageous to glance briefly as to the mode in which this little operation is performed. Mr. Callender has said that if nerve stretching "does no good, it certainly does no harm."

With respect to the amount of force which may be exerted, it is very much greater than would be supposed. Nussbaum, who first suggested the operation (for neuralgia, for which it has generally been practised), advised that the nerve trunks be forcibly pulled, first proximately, and then distally. Mr. Chiene, who published a paper on the subject in the *Practitioner*, for June, 1877, followed Nussbaum's advice; and, in addition, lifted the leg from the table in each of his cases by the sciatic nerve. Dr. Morton, of Philadelphia, and others have resorted to the same expedient.

5. I call your attention in the last place to the length of time after division or excision when sutural re-union of a nerve may give satisfactory results; and I cannot answer this question better than by giving in brief a history of the cases thus far reported.

The first of which I can find anything like a complete record, is that of Mr. Wheelhouse, operated on in 1875. (*British Medical Journal*, August 5th, 1876, and August 10th, 1878.) This patient, who was 22 years of age, was completely paralyzed in his left lower limb, as a result of a division of the sciatic nerve, just below the buttoek, nine months before. On laying open the back of the thigh, the divided ends were found to be two inches apart. On the upper was

a large bulbous swelling, and the lower was somewhat wasted. The muscular irritability was "not wholly destroyed, though well nigh exhausted." The ends of the nerves were pared and then brought together, by flexing the leg strongly and keeping it in this position. Fine carbolized catgut sutures were used, and the nerve sheath only was pierced. Little by little sensation and motion returned, and during the whole of the winter of 1877-'78, he worked as a day laborer without any inconvenience.

Mr. Wheelhouse mentions in his address before the British Medical Association, that Mr. Atkinson had united the median nerve in a similar manner; and Mr. Jessop, the ulnar; but none of the particulars of either case are given.

The next case of which I can find satisfactory notes, was operated on by Langenbeck, and the details are given in the *Lancet* of October 21st, 1876. The sciatic nerve had been divided two years before; the limb was wasted, and the outer part of the foot and leg anæsthetic. The ends were two inches apart, and both were enlarged and surrounded by cicatricial tissue; the lower end was found to contain nerve fibres; the muscular reaction is not mentioned. The limb was bent, and the ends, previously freshened, were united by catgut sutures. Two months afterwards, there was no return of motion, but sensation had improved. I can find no subsequent report of this case, and it is probable, therefore, that it underwent no further improvement.

Another case was reported to the Clinical Society of London, by Mr. Hulke, a few months ago. (*Lancet*, May 24th, 1879.) The ulnar nerve had been divided by a roofing slate fifteen weeks prior to the operation. The upper end was bulbous and drawn aside by a cicatrix; the lower was shrivelled. Both ends were removed by clean transverse incisions, and were then three-fourths of an inch apart. The upper end was stretched and drawn down, and then united to the lower by small sutures passed through the sheath. On leaving the hospital, the man went at once to his work.

At the same meeting of the Society, Mr. Marsh mentioned that Mr. Savory had operated on a similar case two days before, but no particulars were given.

These are all the cases which I can find reported thus far sufficiently in detail to be of value.

The following conclusions are, I think, justifiable:

1. The effects of nerve section and nerve irritation are very dissimilar, but have generally been confounded.

2. Nerve section causes a very gradual degeneration of the peripheral portion of the nerve, and of the muscles to which it is distributed (if it is motor in function)—several months usually elapsing before such a result occurs.

3. If re-union of a divided mixed nerve take place, sensation is usually recovered first, and motion more slowly—the irritability of the muscles returning gradually.

4. The two ends of a divided nerve should be approximated as nearly as possible; but re-union has several times occurred in young subjects when the ends were an inch or more distant from each other.

5. It is advisable to stretch the two portions of a divided nerve in order to approximate them more closely if they are far removed from each other.

6. Sutural re-union may be practised several months, even after the division of a nerve, so long as a trace of muscular irritability remains, and the peripheral portion of the nerve contains nerve fibres.

7. Small, carbolized catgut sutures are preferable, and the nerve sheath only should be pierced.

ART. II.—**The Uric Acid Diathesis.*** By L. S. JOYNES, M. D., Ex-President Medical Society of Virginia; Emeritus Professor of Physiology, etc., in the Medical College of Virginia; Secretary Virginia State Board of Health, etc., Richmond, Va.

I do not propose to undertake a full discussion of the subject before us; for it embraces such a diversity of points—physiological, pathological and therapeutical—that its thorough consideration would be apt to exhaust the patience of the Academy. I shall only aim, in presenting a general view of the subject, to recall to the attention of members the points of leading interest and importance.

*Remarks made in a discussion of this subject in the Richmond Academy of Medicine, November 18. 1879.

It may be remarked at the outset that uric acid, though so sparingly present in the urine, perhaps more frequently gives rise to trouble, and calls for the exercise of our skill, than any other constituent of that excretion—even urea, which exceeds it forty or fifty times in amount. When the latter occasions serious disorder, it is by its deficiency in the urine, and consequent accumulation in the blood. It is so extremely soluble that it is never thrown down in the urinary passages in the solid form, to excite local disorder there. Uric acid, on the other hand, may not only give rise to serious constitutional disorder by its accumulation in the blood, but may be, and often is, precipitated from solution in the urinary passages, and becomes the cause of a variety of troubles, more or less grave and painful.

Physiological Relations of Uric Acid.—But before considering the pathology of this formidable substance, it may be well to say a few words of its physiological relations and properties. Uric acid is a constituent of normal urine, but in very small proportion, not exceeding usually one part in 1,000, or thereabout. The total amount excreted *per diem* is about eight grains on the average, but may be greater or less, according to various physiological conditions. It does not exist, however, in the free state; for it is so exceedingly insoluble as to require 15,000 parts of cold water, and 1,800 parts of boiling water, for its solution. It is naturally held in solution by bases (principally soda), which unite with it to form salts (urates) which are more soluble than the free acid; but it may be readily separated from them, and precipitated in the free state, by any stronger acid; and its precipitation from such cause may occur in the bladder as well as in a test-glass. It is important to note that when thrown down in the free state it always assumes a *crystalline* form.

As to composition, uric acid is one of the most highly nitrogenized products of the organism—one-third of its weight being due to that element. A fact of important practical bearing is, that its amount in the urine is notably influenced by the nature of *the food*. Under an exclusively animal diet there is considerably more of it excreted than under a strict vegetable diet, and especially a diet consisting wholly of

non-nitrogenous substances. Thus, the more nitrogen in the food, the greater the proportion of this nitrogenized product in the urine. Another fact of practical interest is, that its excretion is influenced by the degree of *muscular activity*: active exercise lessens its amount, while bodily repose augments it.

As to the origin of uric acid—the reason of its incessant generation in the organism to be cast out through the kidneys—it is undoubtedly two-fold. It is partly derived from the disintegration and waste of the living tissues, being one of the forms in which the refuse nitrogen of those tissues is eliminated. Urea is the principal effete product of this class; but uric acid bears its part. But uric acid is also derived in part from the unassimilated portions of the *nitrogenized food*—such as have been digested and absorbed, but for some reason have remained unappropriated by the tissues. The proof of this is found in what has already been stated as to the influence of the food on the excretion of uric acid. The urea, uric acid, and other nitrogenous compounds proceeding from these two sources, are mainly gotten rid of through the kidneys—not being formed there, however, but conveyed thither by the circulation ready-formed. Uric acid is therefore present *in the blood*, though in excessively minute proportion.

But it may be asked, if uric acid, like urea, is a product of the waste of tissue, how is it that its excretion is diminished by active exercise, which is necessarily attended with increased waste of the muscular tissue, while the excretion of urea is at the same time increased? This may be explained by the fact that, when uric acid is subjected to certain chemical processes of an oxidizing character, it is decomposed, and urea is one of the products. It is also proved that a similar change may occur in the living body. Now, during active exercise, the respiration and circulation are accelerated, and the consumption of oxygen largely increased. Hence, we can readily understand that, though more uric acid is produced by the increased waste, it is so far destroyed by oxidation, with the resulting production of urea, that less of it is left to be eliminated by the kidneys than under other circumstances.

Pathological Relations of Uric Acid.—As to the pathological relations of uric acid, we have to regard it, in the first place, as connected with *general* or *constitutional* morbid conditions; and secondly, as connected with, and operating as the cause of, various forms and degrees of *local* disorder, affecting the urinary organs.

As to the first aspect of the subject, it is a fact of general observation that an increased excretion of uric acid attends *febrile and inflammatory affections* in general—such as intermittent, remittent, typhoid and typhus fevers, pneumonia, bronchitis, acute rheumatism, etc. During the decline of these diseases, especially, the urine, on standing, very commonly lets fall the so-called “lateritious” or brickdust-like sediments, which consist generally of the *urates*, though sometimes free uric acid is mixed with them. No doubt, these sediments are, in part, due to the comparative scantiness of the urine in the affections referred to, which lessens its power to hold the uric-acid compounds in solution; but accurate examination also proves that the total excretion of uric acid *per diem* is actually increased. Such increase is to be ascribed to the accelerated waste going on in the organism during the progress of acute inflammations and fevers, and which is unmistakably indicated by the attendant loss of flesh and strength. An increased excretion of urea occurs at the same time, and from the same cause. But this increased excretion of urinary effete products is a mere incidental and temporary result of the fever or inflammation, and disappears with the disease which occasioned it, without calling for any special treatment.

What concerns us on the present occasion is the *habitual* production of an excess of uric acid in the organism, or a habitual tendency to its deposition in the urine, independently of such transient causes.

Uric Acid the Materies Morbi of Gout.—The striking example of a grave constitutional disorder dependent on an increased production of uric acid, and an accumulation of that product in the system, is presented to us in gout. That the *materies morbi* of gout is uric acid—that the phenomena of this disease, both general and local, are due to the contami-

nation of the blood with uric acid (not free, but as *urate of soda*)—appears well established. Hence the term *lithæmia* (from "*lithic*," which is another name for uric acid), has been proposed as expressive of the essential pathological character of gout. The trouble here is not an excessive excretion of uric acid by the kidneys, but the reverse. The kidneys fail to do their work with due activity: the uric acid is not eliminated in full proportion; while there is, at the same time, an excessive production of it in the system. Hence, for a two-fold reason, there is an accumulation of it in the blood; and it is this offending material that causes the general and local manifestations of gout.

Previous to, and during the early stages of, a paroxysm of acute gout, the uric acid *in the urine* is much diminished; but, at the same time, its proportion *in the blood* is so much increased as to admit of its ready detection, while in health it is with difficulty that a minute trace of it can be detected. But when the fit of gout is on the decline, and after its cessation, the amount of uric acid in the urine undergoes a marked increase—the kidneys being now aroused to activity, to drain off from the blood the effete material which has been fomenting disorder in the economy. In *chronic gout*, when the patient is all the while suffering more or less with gouty symptoms, with occasional exacerbations, there is a deficiency of uric acid in the urine, and an excess of it in the blood, not only during the exacerbations, but during the intervals also—so that there is a *persistent blood-poisoning with uric acid*. Moreover, the concretions which so often form around gouty joints, and which are known as "chalk-stones," consist of urate of soda, which is eliminated from the blood by being deposited in and around the articular structures, in default of the natural outlet through the kidneys.

Habitual over-indulgence of the appetite, especially with animal food, and an inactive, indolent life, are proved by general experience to be most efficient factors in the production of the gouty diathesis; and we have already seen that they are among the very causes which favor most actively the generation of an excess of uric acid in the system. Habitual indulgence in alcoholic drinks, especially the strong

wines and malt liquors (which is also generally chargeable in a large degree with the evil result), operates partly by encouraging excesses in eating, by the creation of an artificial appetite; partly by deranging the digestive and assimilative functions—both of which effects tend to increase the amount of alimentary refuse which we have seen to be one great source of uric acid. Probably also, such indulgence is concerned in producing that impairment of the functions of the kidneys, which renders them unequal to the complete elimination of the uric acid generated, so that the blood becomes over-charged with it.

Uric Acid Sediments.—But uric acid, when generated in excess, may, if the kidneys retain their full functional activity, be *eliminated in equal excess*; so that the patient escapes the miseries of gout: but if the uric acid happen to be deposited in the free state from the urine, while still in the urinary passages, he will be liable to local troubles which may result therefrom, and which are neither few nor trifling, such as inflammation of the kidneys or of the bladder—whether acute or chronic—nephritic colic, hæmaturia, irritability of the bladder, from the slightest to the most intense; finally, calculus in the bladder, or perhaps in the kidney. Such are the principal items in the sad catalogue.

It not unfrequently happens that a man whose system is prone to the excessive generation of uric acid, suffers occasional attacks of “gravel” up to a certain age, and afterwards becomes subject to gout; because the kidneys have become impaired in function, and no longer eliminate the uric acid as freely as formerly—the natural consequence of which is, that it accumulates in the blood.

It must be understood, however, that deposits of uric acid may take place in the urine, even though there be *no actual excess* of that constituent. If the urine be unduly acid—such acidity being due to some other and stronger acid than the uric—the urate of soda, or other combinations of uric acid, may be decomposed; and the uric acid, being separated from the base which held it in solution, is at once precipitated in the free state. Even when the uric acid is present in excess, if it find plenty of alkaline bases to combine with, without

interference by any stronger acid, no deposit of free uric acid will occur. If any deposit occur—as may happen, especially if the urine be scanty—it will consist of the *urates*, not of the free acid. As a matter of experience, it is observed that urine in which deposits of free uric acid occur is invariably acid—generally much more so than in health.

But it is not every deposit of uric acid observed in the urine after its discharge that is to be regarded as morbid, and as calling for the employment of remedies. If a specimen of urine be only examined after standing twenty-four hours or longer, and crystals of uric acid be found at the bottom, it must be borne in mind that this may be the result of what is known as the *acid fermentation*. When perfectly healthy urine is allowed to stand, its natural acid reaction at first increases, owing to a chemical change—a sort of fermentation—in some of its ingredients, resulting in the production of lactic acid. It is only after this fermentation has expended itself, that the secondary or putrefactive change, which is attended with the development of ammonia, sets in. The lactic acid developed during the acid fermentation may decompose the urates, and precipitate more or less free uric acid, however healthy the urine may have been when secreted. But if the deposition of uric acid commence before the urine cools, or within a few hours after, we may know that we have an abnormal condition to deal with, and have reason to fear that a similar deposition may occur in the urinary passages.

A few words now as to the *diagnosis* of sediments of uric acid. The urine depositing such sediments, besides being generally (as already stated) unduly acid in reaction, is for the most part—though *not always*—more deeply colored than natural, of comparatively high specific gravity, and less abundant than in health; often decidedly scanty. The sediment is *always crystalline*, and when unmixed with any other sediment, the crystals can usually be distinguished by the naked eye, looking like minute sandy particles collected at the bottom, or adhering to the sides of the vessel or test-glass. They are almost invariably *colored*—of some shade of yellow, red or brown; this being due to the tendency of uric

acid to form an intimate union with the urinary pigment. I have seen them, however, so nearly approaching a pure white, that their true character was not at first suspected (they had been precipitated from a very pale urine). On the other hand, I have seen them of such a bright red color, that a conglomeration of them was actually mistaken for a little clot of blood. If the crystals be very minute, or be mixed with some other sediment (as of the urates), they may be undistinguishable to the naked eye, and only discoverable by microscopic examination.

Besides its color, the crystalline sediment may be identified by the following characters:

1. It is not re-dissolved on gently warming the urine. This distinguishes it from the urates.

2. But on warming it with a little *liquor potassæ*, the crystals are readily dissolved.

3. If some of the crystals be placed on a white surface of porcelain, and a drop of strong nitric acid be let fall on them, it will dissolve them with distinct effervescence. If the solution thus made be evaporated to dryness, it will leave a characteristic red stain on the white surface; and if now a drop of liquor ammoniæ be brought into contact with the red stain, a rich purple tint will be immediately developed. This results from the formation of *murexide*, or *purpurate of ammonia*. This test is easily applied, takes but a few minutes' time, and yields a very satisfactory and beautiful result.

But those who are accustomed to the use of the microscope may save themselves the trouble of these chemical tests by subjecting a minute portion of the sediment to microscopic inspection, when the uric acid crystals may be at once recognized by their distinctive characters. The most common form is that of a rhombic or lozenge-shaped tablet, frequently modified by the rounding of the lateral or obtuse angles. There are, however, numerous other forms, which are considered to be so many modifications of the rhombic prism. (After describing these various forms in detail, the speaker proceeded :) The variety of these crystalline forms renders them very interesting objects of microscopic study, but might be supposed very confusing to the novice in micro-

scopy. There is, however, one common character which they present, amid all the varieties of form, and which will generally prevent any mistake: I allude to their *color*. As seen under the microscope by transmitted light, they are almost invariably of some shade of yellow or orange—even those which appear red or brown to the naked eye. There is no other crystalline sediment occurring in the urine which presents these shades of color.

Treatment of Uric Acid Sediments.—In the treatment of these sediments, we must aim not only to bring about their present disappearance, but also to prevent their recurrence. If, as is too often done, we limit our efforts to the former object, the trouble will be very apt to return when our remedies are discontinued, unless the deposition of uric acid be due to merely temporary causes.

The agents employed to effect the solution and disappearance of the sediment, are principally the fixed alkalies, which pass into the urine and form soluble combinations with the uric acid. They also perform the useful office of neutralizing that undue acidity of the urine which is the immediate cause of the precipitation of uric acid. Of the alkalies, potash is generally preferred, because it forms a more soluble combination with uric acid than soda. Of the preparations of potash, the *liquor potassæ*, which has been thought specially efficacious, because containing the alkali in the free state, is not an eligible form; for in large doses it is not well borne by the stomach; and unless given in such doses it furnishes a very small supply of the alkali. Even a thirty-minim dose contains no more than two grains of potassa. The carbonate and bicarbonate are both to be preferred, especially the latter, as being milder and more easily tolerated. A thirty-grain dose of it contains fourteen grains of potassa. But the least unpleasant mode of alkalizing the urine, and a very efficacious one, is by the administration of the salts formed by the combination of potassa with the vegetable acids, especially the citrate and the acetate—the tartrate being too purgative for general use. These salts are converted in the system, by a simple oxidation of their acid, into the *carbonate*, and produce the same effect on the urine as if the carbonate

itself had been administered. They are more readily tolerated by the stomach than the preparations before mentioned, and are taken with much less repugnance—especially the citrate, given in the effervescing state.

An important incidental effect of these potash preparations is their *diuretic* action, to favor which they ought to be given in large dilution. It is obviously a point of leading importance in the treatment, not only of these, but of urinary sediments generally, *to increase the amount of the solvent fluid*, and thereby its power to hold the deposited matters in solution.

Of the preparations of *soda*, besides the carbonate and bicarbonate, the biborate (borax) may be mentioned as a very active solvent of uric acid, and a favorite remedy with some practitioners. Of late years, *lithia* has enjoyed great vogue (in the forms of the carbonate and citrate), because of its great affinity for uric acid, and the fact (as alleged) that the urate of lithia is more soluble than any other urate. Its small combining proportion, which enables a given dose of it to neutralize a great deal more acid than an equal dose of potash or soda, is also supposed to be a great recommendation. But it may well be doubted whether lithia deserves the high encomiums which have been bestowed on it. Roberts—a high authority in such matters—expressly states, as the result of direct experiment, that the solvent power of carbonate of lithia as to uric acid was “found much inferior to that of the carbonates of potash and soda.” And Tanner affirms that, in the trials which he has made of it, “it has only disappointed” him. The small combining proportion of lithia is an advantage altogether illusory; as the dose of a potash salt necessary to produce a certain alkalizing effect is more easily and cheaply obtained than the smaller dose of a lithia salt required to produce a corresponding effect.

Phosphate of soda and phosphate of ammonia are also to be mentioned as efficient solvents of uric acid.

But, as already stated, we must not rest satisfied with the mere disappearance of the morbid deposit from the urine. We should endeavor, by proper constitutional treatment, and

a proper regulation of the diet and habits, to *overcome the morbid diathesis*—to prevent the formation of an excess of uric acid, as well as an undue amount of other acids, which, by passing into the urine, may cause its precipitation.

From what has already been said of the influence of the food upon the generation of uric acid, it is evident that the regulation of the *diet* is of primary importance—that, if the patient has been feeding too high, his supply of animal food must be restricted, with a special interdiction of rich and indigestible preparations of such food. Indeed, in a severe or obstinate case, it will be well to make him a *vegetarian* for a time, and so cut off the material for the excessive production of uric acid. Besides, the urine becomes much less acid under a vegetable diet, owing to the amount of alkaline and earthy bases existing in plants in combination with vegetable acids. The urine of herbivorous animals is always alkaline.

As to *drinks*, it is undoubtedly best, as a rule, that the patient should become a “teetotaller;” not only abstaining from alcoholic drinks, which tend in general to increase the uric acid, but drinking freely of water, with the view of augmenting the flow and lessening the concentration of the urine. If, for special reasons, alcoholic stimulants cannot be withheld entirely, the distilled liquors (brandy, whiskey and gin), taken in due moderation, are safer than wines and malt liquors; because of their comparative freedom from acid, and from saccharine matter also, which is so prone, when ingested in conjunction with alcohol, to generate acid in the stomach. The drinks to be especially avoided are the stronger wines and malt liquors. The light German and French wines are less injurious, chiefly because of the small proportion of saccharine matter which they contain. Tea and coffee should not be forbidden, because it has been ascertained that they tend to diminish the production of uric acid.

That *exercise* diminishes the uric acid, while repose increases it, has already been stated. Hence the sufferer with uric acid gravel, no less than the victim of gout, must give up indolence and sloth, and bestir himself actively in the open air. Besides the influence ascribed to it in remarks already made,

exercise acts beneficially by promoting, first, the digestion of the food, and then its assimilation; so that it leaves less refuse to be gotten rid of. It likewise tends to keep the *skin* in healthy action. This latter is an object of no little importance. The skin is an outlet for a certain amount of refuse nitrogenous matter, and may be said to supplement the action of the kidneys in this respect. Urea has indeed been proved to be a normal ingredient of the sweat. Hence, if the action of the skin be deficient, an increased burden of excretion will be thrown upon the kidneys. The cutaneous functions ought therefore to be promoted by all proper hygienic measures, and, when occasion requires, by the administration of diaphoretic medicines, or perhaps the use of the warm bath.

An indispensable part of the treatment is the correction of any error of the digestive or assimilative functions, on which the excessive production of uric acid, or an unduly acid state of the urine, may possibly depend. The functions of the stomach and liver will demand careful attention. It would occupy too much time to consider the various remedies which may be called for under different circumstances to rectify the digestion, and correct any tendency to the undue development of acid in the stomach. As it respects the *liver*, we have the opinion of a very high authority (Murchison) that functional disturbance of this organ is the real cause of the excessive generation of uric acid. Without discussing the correctness of this opinion, it may be remarked that, if it be only half true, it furnishes a cogent reason for seeking to rectify any wrong working of the liver which careful scrutiny can detect, by means of alteratives, aperients, and other suitable remedies.

A useful lesson in the treatment of uric acid deposits is furnished by the observation of Ranke, that when twenty grains of *quinine* had been taken, the excretion of uric acid, in the following twenty-four hours, was reduced to less than half its previous amount; and by the later observation of Pringle, that ten grains, given daily for several days, brought about an equal reduction. Quinine has also been recognized of late years as a valuable remedy for gout. There is little doubt

that this agent lessens in some manner the production of uric acid in the system.

The same is probably true of *colchicum*, which besides its unequalled powers in gout, is often useful in the treatment of uric acid sediments. The opinion formerly entertained, that it causes an increased excretion of uric acid, has been proved to be incorrect.

Benzoic acid has been recommended in these troubles on the ground that, while itself containing no nitrogen, it combines with nitrogen in the system, and appears in the urine as hippuric acid—its nitrogen being supposed to be taken at the expense of uric acid, which is thereby destroyed. But this is an error; the nitrogen is appropriated at the expense of urea, and the ingestion of benzoic acid does not affect the uric acid in any manner.

Great benefit may often be derived from the use of *mineral waters*, especially those which contain alkaline ingredients; such as the Saratoga waters, which contain (with various other ingredients) the carbonates of soda, lithia and magnesia, held in solution by an excess of carbonic acid gas—those of Vichy, which are richly impregnated with bicarbonate of soda—and the Buffalo Lithia water of our own State, which contains both lithia and potash, as carbonates or bicarbonates. Even waters which are simply saline, without any marked alkaline quality (such as those of our Alleghany and Blue Ridge springs), will often prove serviceable, by their conjoined aperient and diuretic action, and their well-recognized power in rectifying derangements of the digestive function; and a part of the benefit obtainable from the Saratoga waters is also to be ascribed to those saline ingredients which render them so efficient as aperients and correctives of the gastric and hepatic functions.

Sediments of Urates.—Having devoted so much time to the sediments of free uric acid, I can say but a few words of those which consist of the *urates*. These, though much more frequent than the others, are of much less practical consequence. They are more readily caused by slight derangements of system, and do not produce the same serious results. They are often transient, and require no particular treatment.

But when occurring habitually, they must be regarded as constituting a form of the uric acid diathesis—the acid remaining in combination with bases, instead of being precipitated in the free state. The urates in these sediments are usually “mixed”—that is, not consisting of urate of soda alone, but of this mixed in varying proportions with one or more of the urates of ammonia, potassa, lime and magnesia. The sediments vary from a pale fawn color—sometimes nearly white—through pink and various shades of red, to purple, according to the color of the urine itself. The urine in which they occur is, as might naturally be inferred, less acid than that which deposits free uric acid. They never make their appearance until the urine cools, and then on warming the urine, they are re-dissolved, to appear again on a second cooling of the urine. They are very rarely crystalline, but appear under the microscope as a multitude of minute amorphous particles, which tend to arrange themselves in irregular lines or clusters. Occasionally they present themselves in the form of much larger, globular bodies; and now and then the urate of soda is seen in the form of little round masses, with sharp crystalline spiculae projecting from them.

The treatment of these deposits, when occurring habitually, is the same in principle as that of the deposits of free uric acid; though it seldom requires to be pushed as vigorously. We must endeavor to lessen the production of uric acid, and increase the amount and solvent power of the urine. Very often, indeed, the urates are thrown down, not because they are excreted in excess, but because the urine is too scanty to hold them in solution; and an increased flow of urine, however produced, will cause their disappearance.

ART. III.—A Case of Ovarian Disease—Removal of both Ovaries by Modified Antiseptic Method—Recovery—Remarks.

By FRANCIS D. CUNNINGHAM, M. D., Professor of Anatomy Medical College of Virginia; Ex-President and Honorary Fellow Medical Society of Virginia, etc., Richmond, Va.

In June, 1879, I was called to see Miss A. B., in consultation with Dr. J. Prosser Harrison, of this city, and from her

obtained the following history. She is 31 years of age, and enjoyed general good health up to March, 1879, when she first noticed an enlargement of the abdomen—she thinks first on the left side—and which has continued to increase until she now measures thirty-nine inches around the waist, and suffers great discomfort. She was about fourteen when she first menstruated, and was always regular as to time and quantity, until she noticed the enlargement in March last, after which she was unwell three days in every fortnight. She has no idea of what caused her trouble, and recalls no circumstance in her past life to account for it, beyond the fact that she may have taken cold whilst debilitated, from long attendance on a sick relative.

A careful examination, and application of the usual tests, convinced us that it was a multilocular cyst of the left ovary, and we advised an operation in Richmond, in case our opinion was confirmed, after consultation with some of the authorities on diseases of that nature. With the intention of consulting either Dr. Emmet, or Dr. Thomas, of New York, in July, our patient went as far as Baltimore; and learning that both of the gentlemen above named were away from New York at that time, she consulted Dr. Allan P. Smith, of Baltimore, who agreed with us as to the diagnosis. She returned to Richmond early in September, and the abdominal enlargement had increased some four inches. Her discomfort also was much increased, so that her rest was much broken, and she manifested clearly the debilitating effects of disease in her loss of flesh and general nervous condition. There had been no return of the menstrual flow since July, when it lasted six days and was very profuse.

On *September* 15th, with the assistance of Dr. J. P. Harrison, I aspirated the tumor in the median line, and drew off from one of the cysts four pints of gelatinous fluid, of characteristic appearance; and under the microscope, as reported by Dr. J. S. Wellford and Mr. Hugh Blair, showed the so-called "Drysdale cell." This tapping was followed by very slight relief as to the abdominal tension, and with no constitutional disturbance suggestive of inflammatory action about the abdominal cavity. About the thirteenth day after the tapping, there were some symptoms of peritoneal trouble, especially in the left hypochondriac region, and the pain was so acute as to require an anodyne at night; and the appetite, which had been fair up to this time, began to fail, and the taking of all food produced more or less distress.

Just two weeks after the aspiration, on the 31st of Septem-

ber, at 2 P. M., we operated with the assistance of Drs. Harrison, Vest, Wellford, Skelton, Brock and Johnston. A spray of carbolic acid (one part to fifty) was used in the room and about the table, and a solution of one part of carbolic acid to seventy-five of water was prepared for washing the sponges, instruments and hands prior to use in the operation.

The usual median incision, six inches in length, was made, and after the abdominal cavity was opened, the carbolic spray was not directed into the cavity or on the viscera. The peritoneum was very much inflamed, decidedly red everywhere, and the walls of the abdomen were slightly pasted to the sac wherever the two had been in contact—the slight adhesions, when separated, causing in many places free oozing of blood from the surfaces previously in contact. None of these adhesions were sufficiently organized or vascular enough to require ligation of vessels. The numerous cysts were carefully evacuated, and the tumor was readily withdrawn from the abdomen. The pedicle, which proved to be from the left ligament, was short and thick. A clamp was first put on the pedicle; it was then tied in two segments, with carbolized silk ligatures, the tumor cut off and the stump returned to the cavity.

The right ovary being also diseased and of the size of a very large walnut, it was treated in the same way, cut off and the stump left in the cavity. The abdominal cavity was carefully cleansed with carbolized sponges, dried with napkins, and the wound was closed with six deep and two superficial sutures. The patient was under the anæsthetic and on the table altogether one hour and twenty minutes—having been chloroformed in bed and returned to it unconscious. Anæsthesia, having been first produced with Squibb's chloroform, was kept up with an anæsthetic mixture composed of one part of 95 per cent. alcohol, two parts chloroform, and three parts sulphuric ether, by measure. The amount used by Dr. Skelton, who administered it, was, for the whole operation, one and a half ounces of chloroform and four ounces of the mixture.

In the treatment of the abdominal wound, the Lister dressing was used in all of its details of "*protective*," gauze and rubber cloth, the whole secured by a flannel bandage. The patient came from under the anæsthetic in a very satisfactory condition, and with pulse better than before the operation. The weight of the whole tumor was thirty-five pounds, and that of the solid portion four and a half pounds.

One hour after the operation she complained of pain in the

groins and back, with a drawing sensation that made her very nervous. For this, a fourth of a grain of sulphate of morphia was administered by Dr. Harrison, who took charge of the case, with authority to control the pain by the use of the anodyne whenever in his judgment it was indicated.

At $4\frac{1}{2}$ P. M., temperature was 98°F. , and pulse 86.

At $8\frac{1}{2}$ P. M., temperature was 101°F. , and pulse 108.

Oct. 1.—Passed a quiet night, with the anodyne at intervals of six hours; vomited during night without much effort. 8 A. M., temperature 100° ; pulse 104. At 2 P. M., temperature $99\frac{1}{2}^{\circ}$; pulse 102. 8 P. M., temperature $99\frac{1}{2}^{\circ}$; pulse 104. Lime water and milk.

Oct. 2.—During the night and to-day, temperature quite constant at $99\frac{1}{2}^{\circ}$, and pulse ranging from 100 to 112, after attacks of vomiting which occur whenever there is any accumulation in the stomach which seems to be in a state of inertia. For this condition, brandy and soda water were given.

Oct. 3.—Temperature and pulse averaging 100 and 110 respectively for last twenty-four hours. Removed dressings and examined the wound, which looked as if it had been kept too warm and moist, although there is some union. Applied the antiseptic dressing without the *protective* and *rubber* cloth, being satisfied that they act in such a way as to produce the effect of a poultice, preventing evaporation and keeping the parts warm and moist, and to this extent they prevent instead of promote union by the first intention.

Oct. 6.—Everything progressed favorably since last date—the temperature and pulse averaging 99, and 100—103 respectively. Removed dressings. Wound looks much better. No suppuration, and union quite firm. Complaining of some discomfort from the gas in the bowels: they were moved with an enema of warm soapsuds, slowly and carefully administered, after which she had a very comfortable night. Removed half of the sutures, leaving alternate ones.

Oct. 9.—Removed the last deep sutures; wound firmly closed, and general condition all that could be desired. Temperature 98° ; pulse 96. Beef tea, brandy, milk, etc., were administered.

From this date our patient progressed most favorably, and with no drawbacks whatever beyond a little nervousness on withdrawal of the morphia, which was stopped on the twelfth day; and on the fifteenth day after the operation, she was seated in a chair by the bedside. On the twenty-third day after the operation, she felt so well, and the weather was so pleasant, that she was allowed to visit a neighbor, walkin

one hundred yards. On the twenty-ninth day she visited the grounds of the State Agricultural Fair, and spent two or three hours on her feet looking at the exhibition.

Nov. 7.—Our patient has continued to improve in strength and flesh up to this time, and says she is as well as ever, inasmuch as she only suffers with her back when standing too long, or taking too much exercise, as was the case prior to the appearance of her disease.

Remarks.—From the hour of the operation, our patient really had no unfavorable symptom except the vomiting, which occurred as a result of want of tone in the stomach and bowels under their new conditions; and this condition was remedied as speedily as was safe, by the use of the enema as directed by Dr. Harrison, at whose house fortunately our patient was treated, and to whose judicious after-treatment I attribute no small part of our success.

It has been our fortune to have witnessed the operation of ovariectomy as performed by a number of surgeons in this country and in Europe, both before and since the introduction of the Lister method of dressing wounds. I may add here that I have known the operation to be performed by at least seven resident surgeons in this city in the past twenty years, and by several of them on more than one occasion. In this city, the results of the Lister method of operating and dressing have not been so conspicuously successful, as compared with previous methods. Whether or not the exact details of the operation as directed by the illustrious gentleman whose name is so intimately associated with antiseptic surgery, were faithfully carried out in each and all of these cases, I am unable to say. In those at which I was present, so far as I could judge, every detail was observed. At the time I assisted in several of these operations, I was extremely doubtful of the propriety of playing the carbolic spray upon the viscera exposed in the opened abdominal cavity, especially when I reflected on the delicate structure of the peritoneal investment of those viscera and the abdominal walls. A solution or spray of carbolic acid of the strength usually advised, must, it appears to me, destroy the delicate epithelial layer of the peritoneum, and aid in causing inflammation.

Again, in the use of the protective immediately over the wound, and the MacIntosh outside of the carbolized gauze, we may keep out some obnoxious germs; but at the same time, if there is anything to be learned from experience, I think we are bound to admit that we place the parts in a condition most unfavorable to union by the first intention. We would not be understood as saying a word against antiseptic surgery, whose value is testified to by thousands of lives which otherwise would have been sacrificed in the crowded hospitals of the great cities of this and other countries. We would simply question the propriety of the so free use of the agent, carbolic acid, in the abdominal cavity before there is any evidence of decomposition of fluids, or disease of the parts to which it is applied; or we would ask if, in this matter, we may not sometimes be wrecked on *Seylla* in our efforts to avoid *Charybdis*?

In our case, we were most fortunate in operating before any strong or extensive adhesions had occurred. At the same time, there were more evidences of *acute* general peritonitis than we had ever before seen at any operation by others. The symptoms of acute peritonitis only set in some thirty-six hours before the operation, and from the pulse and temperature, it must have begun to subside inside of twelve hours after the operation, thus corroborating the assertion of several authorities, that a slight degree of inflammation of the peritoneum is no drawback, but rather adds to the chances of success after an operation.

In conclusion, we have deemed our case worthy of record because of the rapid recovery, and from a statistical standpoint, because of the interest attaching to the several modes of operating and dealing with the pedicle, whilst our remarks are submitted with all respect for authorities, and as the simple suggestions of a busy general practitioner.

Blackberries for Tapeworm.—Blackberries were recently recommended as *tæniifuge* by Dr. Lederer, who reports a very successful cure of an old lady who had previously taken all other remedies without success. *Pharm. Ztg.*, 1879, *Amer. Jour. Pharm.*, Dec., 1879.

ART. IV.—**Excision of the Knee-Joint.*** By JOHN N. MONMONIER, M. D., Late Professor of Surgery and Anatomy in the Washington University, etc., Baltimore, Md.

There is, perhaps, scarcely any operation whose merits have been so differently estimated by different surgeons—one which has been so lauded on the one hand, and so depreciated on the other—as excision of the knee-joint. Whilst some surgeons have the highest opinion of the operation, and almost invariably resort to it in cases of incurable knee-joint disease, others look on it with coldness and mistrust; and, if they do not discard it altogether, they resort to it only in the last extremity, and, as it were, under protest.

Nor is this wide difference in the estimation in which the operation is held difficult to account for; on the contrary, it is probable that these opposite views are justified by experience, and that the opinion of any individual surgeon is drawn from observations on the result of his own cases or those of his friends. Now, this is what I wish to indicate—namely, that, in actual fact, the results of the operation are, in different hands and under different circumstances, as totally opposite as are the opinions which are held of its value. One operator has good results, and an almost uniform success; another, of perhaps equal skill and reputation, is just as unfortunate in his cases. This statement can be confirmed by any one who will investigate the literature of the subject.

The operation itself being easy of execution and presenting no difficulties, it may readily be allowed, that, for all practical purposes, it is as well performed by one surgeon as another; also, that although the selection of suitable cases is a matter of the utmost importance, it may fairly be presumed that the class of surgeons who usually excise joints are not likely to select improper cases; and that, by far, the greater majority of those excised are fit and proper ones for the operation.

What, then, is the cause of this difference in results in the hands of different operators? The answer is, that, although

*Read before the Baltimore Medical and Surgical Society, and reported by T. J. WARD, M. D., Secretary, etc.

each surgeon may operate in much the same way, the same scrupulous care is not shown by all in preparing and applying the apparatus for insuring rest; nor are equal trouble and pains taken by every surgeon in personally attending to the minutiae of the after-treatment.

I think I may assume, as an axiom, that the best after-treatment is that which insures the most perfect rest; and that, if an apparatus could be applied which would effectually prevent the same surfaces from receiving even the *slightest jar* from the time of the operation until union had taken place, this would be a perfect plan of treatment. Also, I may fairly take for granted the converse of this, namely, that any plan of treatment which does not insure absolute and perfect rest, with freedom from even the slightest occasional jar, during the entire period in which the bases are uniting, is not perfect; and that the further the treatment fails to produce this effect the more imperfect is the treatment. And still more, that any treatment which entails necessarily daily jarring of the same surfaces, and perhaps the removal and re-application of the apparatus during the period of union, must be very imperfect indeed, and must militate much against the prospect of recovery with a useful limb.

I trust I am keeping within bounds when I express my belief that this perfect rest is not maintained in the great majority of cases operated upon; that it is kept up by some surgeons more than by others; and that, in proportion to the extent to which this principle of perfect rest is observed, so is the success.

It is my belief that any movement or jar which causes even slight pain is injurious to the successful progress of the case, and that occasional jars, producing some amount of concussion of the bony surfaces, are, in many instances, the cause of unfavorable termination; and that, although some cases may, and do come to a successful issue while subject to, and in spite of these drawbacks, yet this want of perfect rest is the main cause which operates against recovery. Thus, too great care cannot be taken to prevent such movement. I have remarked cases very fairly put up, and which

have afterwards done well, shrink on an approach to their bed, or a heavy step across the ward or room; so that the pain and injury which must be caused if the splint has to be removed, or the limb otherwise jarred, should lead us to adopt the strictest precautions.

The dangers which imperil the perfect rest, which it is desirable to secure, are two-fold. Thus, they arise, firstly, during the performance of the operation and the application of the splint; and secondly, after the patients removal to bed, and during the after-treatment.

I will, as briefly as possible, enumerate what are some of the chief of these dangers, trusting that the points I may mention will not be considered trifling. Success in this operation depends more, perhaps, than in most others, on the strict observance of those little precautions and cares which may appear to some as beneath their notice, and rather belong to the province of the dresser or nurse.

Causes which arise during and immediately after the Operation, tending to Produce Injury of the Surfaces.—1st. Injudicious sponging, excessive or too forcible sponging, which is likely to irritate and bruise the bony structure.

2d. Too powerful use of the saw, or employment of the gouge to remove bone, which may appear diseased after the surfaces have been sawed.

3d. Closing of the wound before all hæmorrhage has ceased, and omission to secure all the small vessels.

4th. Want of care in the dresser or other person holding the limb after the excision, while the splint is being applied or hæmorrhage arrested, whereby, from proper extension not being maintained, or other cause, the sawed bones are allowed to press or knock slightly against each other, and the cancellous structure to be bruised.

5th. In cases where there has been some dislocation and consequent contraction of the flexors of the thigh, insufficient removal of bone, so that the same surfaces are drawn and pressed against each other by the shortened and contracted muscles.

6th. Incision not sufficiently dependent at the sides, so that bagging of matter may possibly take place, requiring

subsequent opening and exposure to the risk of escape of matter into the splint.

7th. The flowing of blood into the splint at the time of its application, causing at a later period putrefaction and smell, and entailing the changing or purifying of the splint.

8th. In cases where a metal or other splint is applied, want of foresight and care in the padding or application of the splint, so that subsequent alteration or shifting is required, entailing a certain amount of movement. Thus, want of regard in making the splint comfortable to the patient, and securing him against undue pressure on any particular spot, or in providing carefully against the tendency of the bones to become displaced in certain directions.

9th. In cases where sinuses exist, either towards the posterior aspect of the limb, or some little distance up the thigh or down the leg, the neglect of proper precautions to insure that the discharge from the sinuse or sinuses is not blocked or interfered with by the apparatus applied; also, that there is no possibility of the matter finding its way into the splint, and thus causing foulness of the splint and necessitating its removal.

The above are some of the chief little mishaps and drawbacks which may occur during or immediately after the operation. They, for the most part, suggest their own remedy. The matter of keeping the splint clean is very simple, and only requires a little care. I have usually kept a piece of lint, thickly spread with zinc ointment, applied to each side of the leg below the incision. This dressing sticks closely to the limb as far as the narrow part of the splint, and is then turned outwards to the pominger, forming a sort of gutter; the blood or discharge will run over the zinc dressing, and is entirely prevented from getting into the splint.

With regard to the second point—namely, the dangers which imperil the patient's perfect rest after his removal to bed and during the after-treatment, I think it is more than probable that many hospital surgeons are quite unaware of the interruptions their cases receive after leaving the table and remaining from visit to visit under the care of the dresser or house-surgeon. The dresser likes his case to look clean

and trim for the surgeon and re-applies bandages; the nurses change sheets; and between the two, the patient gets rather more attention than is good for him.

Take the case of a female patient whose leg has been put up in an ordinary Ferguson's excision splint; the extension piece is not long enough to be of much service; and there is only room between the excised joint and as near the vulva as one can conveniently apply dressings for a few turns of bandage, which must not be too tight, on account of some little swelling which is likely to take place. Thus secured, the patient is removed by the porters or other unskillful persons, and she will be fortunate if the leg does not receive a fair amount of shaking in getting her to bed. We will suppose, as entailing the least amount of jarring or movement, that the leg is swung. Now, whenever this patient uses the bed-pan, or has draw-sheets or other sheets changed—and, of course, these are daily occurrences—the bones are jarred. And necessarily so, for the following among other reasons: Every time the patient's buttocks are raised, the weight of the iron excision-splint falls, to a great extent, on the upper surface of the thigh, by means of the bandage confining the thigh to the splint—the remaining weight of the splint resting on the swing at the foot or leg. Of course, a careful nurse may raise the thigh-piece of the splint at the same time as the buttocks by the tape connecting it to the cradle; but nurses are scarcely likely to take this precaution, and if they do they will effect more harm than good from the difficulty of following the movement of the patient: besides, the raising of the splint and patient would be scarcely likely to be simultaneous.

There is, unless guarded against, a drawback in the use of these splints when swung—which is, that, the foot being raised, the weight of the splint acts in pressing towards the hip; and as this is a fixed point, the weight is exercised, as a matter of course, in pressing the sawed surfaces together.

I hope I have been able to point out some of the disadvantages under which cases of excision are often placed.

In published reports of cases, it should particularly be mentioned at what *date the splint was first removed* or changed.

From observation and inquiry, I am inclined to believe that, in a considerable proportion of cases of excision, the splint is changed within or about three weeks from the operation, on account of soiling of the splint. If this be true, we cannot be surprised if excisions often do not turn out satisfactorily. At the end of three weeks repair is taking place, but union can scarcely be said to have commenced. Yet, often at this time, if not earlier, the bones are moved, and a certain amount of inflammatory action is not unfrequently set up.

These dangers, then, have to be guarded against by—

1st. Taking the necessary precautions at the time of operation to insure perfect rest, and to provide against any soiling of the apparatus or shifting of the sawed surfaces—either of which would entail moving the limb before the cure is complete, and danger to the limb.

2d. Supposing every precaution to have been taken at the time of operation, it will be necessary afterwards to guard against any movement which might be caused by changing of bandages, dressing, or splint by the dresser, etc.; and, what is still more essential, nurses must not be allowed to shift sheets, or in any way disturb the patient, except under the personal supervision of the dresser or house-surgeon.

Important among the precautionary measures to be taken to prevent movement, is careful padding of the splint. This duty is usually left to nurses, and very often indifferently executed by them. The splint must afford him even support. Therefore, nothing of the nature of cotton wool or tow should be used. The best plan is to take an old blanket and cut it into shapes the size of the thigh and leg-pieces of the splint. Then take as many pieces as may be necessary to afford the desired thickness, have them quilted firmly together and covered with linen, and then strained tightly to the splint so as to fit its hollows.

In padding the splint, it is well to bear in mind what we have to guard against. Thus the pad should be thicker under the head of the tibia than under the thigh, or farther down the leg; and this is better provided for by quilting in extra layers of blanket in this part than by pushing in a pad at the time of operation or other make-shift contrivance.

We must also provide in the padding for a full drop of the heel, which will not bear any permanent pressure. By putting additional padding under the head of the tibia, and allowing the heel to drop, we entirely avoid what is the most common displacement after the operation—namely, slipping of the tibia backwards behind the femur, or, what is, in effect, much the same thing, displacement of the femur forwards over the tibia. Over the narrow part of the splint, it is best to use a movable splint of the same character as the fixed portion and covered with zinc dressing—so that, if, unfortunately, it should become soiled, another could be sewn to it, and drawn under without disturbing the limb.

In bandaging the limb to the splint, it is well to bear in mind that it is not a matter of indifference whether the bandage be applied in one uniform manner, viz., from left to right, or from right to left, as the dresser or surgeon be disposed; on the contrary, a bandage applied, say from right to left, presses more particularly in that direction, especially at the moment of application, so that it is possible the bones may be slightly disturbed in their relation to each other during the bandaging. Recollecting the tendency of the femur to rotate outwards in excision, we shall do well to bandage over this bone from without inwards; while over the tibia it is better to bandage from within outwards.

The apparatus to be applied depends, of course, on the individual preference of the operator. I am inclined to think that, for adults, Ferguson's excision splint, with an extension piece longer than usual, and reaching to the axilla, answers very well. Mr. Gant, the English surgeon, favors this apparatus. There are objections to this splint, such as its weight and the fixed position it entails on the patient; but it has this advantage, viz., that in case there should be any tendency to displacement, the surgeon can exercise a good deal of control over the relation of the two bones to each other without disturbing the limb. The measures I have adopted in using this splint are the following:

1. To fix it well at the axilla by a band made precisely like an ordinary perineal band. This is passed over the front of the opposite shoulder; then behind the back, and tied to

the top of the extension piece, thus keeping the latter firmly fixed to the armpit.

2. To secure it by a wider band, which, being strapped firmly around the hips, steadies the apparatus at this point, and prevents jarring in the case of any attempted movement of the buttocks.

3. Having the limb swung sufficiently to clear the bed, a weight affixed, working over the pulley or to the foot piece, heavy enough to counteract the pressure of the splint towards the hip. Moreover, should the knee be painful from the bones being pressed together by contraction of the muscles, the weight may be increased and made to exercise as much extension as may be necessary to overcome such contraction and consequent pain; to do this, loosen the thigh bandage, and put on as much weight as may be required to afford ease.

4. There is occasionally after the operation some starting and jumping of the muscles of the thigh. This is usually relieved by a nurse keeping her or his hand gently on the thigh; but what is more effectual for the purpose, is an oblong bag of sand—the sand in it being so arranged that when the bag is applied over the thigh, the material of the bag lies smoothly on the front of the limb, while the sand, distributed as required at both ends of the bag, forms a steady weight on each side, which, although allowed to rest almost entirely on the bed, and keeping but slight pressure on the thigh, is yet ready to act should there be any starting of the muscles in sleep or otherwise.

Lastly, and not least, an important point is to have a proper bed, so that the patient can use the bed-pan and have draw sheets changed without the slightest movement. A mattress is recommended for this purpose, of the simplest possible description, and inexpensive. It consists of two half mattresses firmly stuffed with horse-hair and of good thickness. These two halves have a definite space between them, which is exactly filled by a rectangular air cushion. This cushion, when the mattress is in use, is firmly distended with air, and is under the patient's buttocks. When the bed-pan is required, it is only necessary to let the air out of the cushion, and slip

the pan in to occupy the former distended space. On its removal, the cushion is again blown out. This arrangement of mattresses is not only useful in cases of knee excision, but can be most advantageously used in cases of excision of hip and acute hip disease.

Thus Ferguson's excision splint, with some modification, affords a very good means of securing the limb after excision in the case of adults. But for children it certainly is not suitable; for these we require something lighter, more movable, and not necessitating that strict restraint from movement which this splint entails.

The following apparatus, perhaps, will be found best for children. It is light, entirely prevents any movement between the same ends, and admits of some little twisting about on the part of the child without injury to the limb. The splint consists of leather, strengthened at the back by a piece of iron, about two inches wide, and riveted to the leather. To prepare it, cut a piece of leather stout in proportion to the age and size of the patient, in length from just above the heel to within two inches of the fold of the knee-joint, wide enough to surround two-thirds of the leg, and properly shaped. Prepare another piece to extend from about two inches above the joint to the tuberosity of the ischium, and long enough to reach on the outside and front as high as the crest of the ilium. The two pieces of leather are connected by the piece of metal of the width I have stated—a space of about four inches (but varying according to the size of the patient), being left between them. The piece of metal passes the length of the splint to within about half an inch of either extremity; it is hollowed slightly to correspond to the curve of the leather, to which it is riveted along its whole length by two rows of rivets. Before the operation, the leather, with the metal attached, is soaked in water and thoroughly softened; chamois leather is pasted to its inner surface, and the whole made ready.

Immediately after the operation, the splint is applied to the limb and fixed by gum bandages, which commence at the foot and terminate by a figure of eight around the pelvis. Great care should be taken that the blood does not ge

into the splint, while the limb is laid in a McIntire's or some fixed apparatus for twenty-four hours to keep the foot straight and in good position while the gum hardens. The patient requires no other support until union has taken place and he is able to walk. Perhaps an improvement and advantage over the gum bandage would be in the application of the plaster-of-paris bandage to the splint, as the plaster readily sets and hardens. The limb is then swung; the apparatus being light and firmly fixed to the trunk, readily follows any movement of the patient without jar. This splint may be used in some cases among women.

One point remains which influences the result of excision of the knee-joint, and that is the sanitary conditions under which the patient is placed. It appears tolerably certain that a patient about to undergo excision of the joint, entailing at best a somewhat lengthened convalescence, is not having the best thing done for him when he is advised to submit to the performance of the operation in a crowded city, or worse still, in large city hospitals as at present constructed. The fact that the disease for which the operation is recommended often has its origin in constitutional causes, and that the successful progress of the union between the bones depends so much on the maintenance or recovery of the general health, renders it scarcely fair to the patient with joint disease to excise under such unfavorable circumstances.

A few concluding remarks. About seven years ago there were laid before the profession in England, by a few surgeons, some special observations on excision of the knee-joint. Notably among them was Mr. Oliver Pemberton, who discussed many mooted points. These remarks excited at the time, and since, a good deal of comment, more especially in regard to the question of the want of growth in the limb submitted to operation in the young subject. Pemberton at this date has not changed his opinion as then expressed, to the effect that this want of growth rendered the limb in after-life useless, and hence the proceeding was not to be recommended in children. For this avowal, Sir Wm. Ferguson took a decided stand. It must also be noted that in 1870 M. Paget excised the knee-joint of a lad aged eight years, in St.

Bartholomew's Hospital; and that another case of a boy whose knee had been excised by him three years previously, had come under his care again on account of disease in the opposite hip; the result as regarded the knee, it is said, has been very successful till lately, when flexion had taken place. There seems to be no decided and fixed opinion among pathologists on this particular question of want of growth. I believe M. Paget is silent. A most striking instance of success of the mere operation in the hands of Mr. Vincent Jackson would insure conviction of the usefulness of the limb in after-life. The case, that of a girl aged twelve years, was presented to the Pathological Society of London nine months after operation; a cast, taken of the united bones and limb, showed them to be perfectly straight when dismissed from hospital. Twelve months later, the bony union had yielded, giving rise to a considerable flexion in the limb.

Apart from the want of subsequent growth, there may be entertained a very strong opinion that we are not justified in relying on the permanence of the union between the sawed extremities of the bones in children as we would in adults. Some years since, I excised the knee-joint of a boy, aged ten years. The union was perfect and everything to be desired, when he went to a distance and I lost sight of him. Three years after the operation, he was casually seen with the limb flexed approaching a right angle; and with this angularity the union was sufficiently bony.

The truth is, that it takes a great deal longer in children to obtain an absolutely immovable union than it does in adults; and it is necessary, in order to guard against subsequent yielding, to insist on the patient's wearing a leather support, strengthened with light ribs of steel, or turns of plaster-of-Paris bandage, for at least twelve months after excision.

But we may pass on, with no little satisfaction, to make a few remarks on the operation in adult life, prefixing the expression of belief that between the ages of fifteen and thirty-five, the operation of excision of the knee, as revived by Sir Wm. Ferguson in 1850, and improved by others, in suitable cases, maintains itself as the most conspicuous illustration of the ability of conservative surgery in the present century.

Those cases will be found most eligible for excision where the mischief in the bone is limited to the articular extremity, and where the soft parts have not become adherent to the parts beneath, from the presence of sinuses, or from the general effects of long continued disease. In accordance with the teaching of this dictum could be mentioned several cases of operation resulting from many variable conditions of disease and injury; but as time will not permit, only a few typical cases can be referred to.

In the year 1870, a stout man presented himself to me with the left knee diseased from a contusion received during the late war by being struck by the butt-end of a rifle shell. From that period, at times, he had been more or less disabled. The following was the actual condition of the parts: Joint bent at an angle of thirty degrees; foot raised six inches from the ground when standing upon the sound limb. There was little movement, with the patella adherent to the external condyle; no sinuses, but the appearance of the joint and tenderness on firm pressure gave no doubt of the extensive destruction of soft parts within. The joint was excised by a semi-lunar flap, removing altogether one inch and three-fourths of bone from the femur and tibia, together with the patella. Afterwards, the limb was placed in plaster-of-Paris bandages, arranged around the lower part of femur and upper part of tibia, so as to have perfect immobility, and suspended in a straight anterior splint fixed by turns of plaster-of-Paris bandage, so as to insure perfect rest of the entire limb. At the end of four weeks, the wounds had entirely healed. The entire apparatus, etc., were then removed, having never been disturbed, and the limb allowed to remain upon the bed with support only from a sand pillow. In seven weeks, he left the bed, walking with crutches. In eight weeks, he walked across the room, bearing the whole weight on the limb—there being solid and complete union. Upon examination, the articular surfaces showed universal destruction of synovial membrane and cartilage.

One special remark should be made upon this case: In the section of the bones, triangular pieces were so removed that when union was accomplished, the contour of the limb presented anteriorly a convexity, rather than straightness. Experience teaches that this slight flexed position gives additional power and facility in laborious movements, etc.

Since this case was operated upon, I have seen Mr. Gant's paper, of London, on Excision of Joints, in reference to securing movement in the limb after the operation. To my mind, it is not desirable to follow his suggestions in some cases—certainly not for laborers and artisans—as the operation is mostly confined to those who have to labor to live, or who have met with accidents.

Now to refer to an occurrence after the operation of excision of the knee, with a complication that ended fatally and perhaps hitherto unknown :

Three years since, in December, 1876, I excised the joint of a lad, fourteen years of age, for strumous disease commencing in the synovial membrane, of some six years duration, with great deformity—the dislocation of the tibia backward being most complete. The general health seemed to be as perfect as could be under the circumstances, and the condition of the joint seemed to accord with an accurate description of cases suitable for operation. The operation, the amount and condition of bone removed, etc., were about the same as in the preceding case. Probably, due to the more complete dislocation of the limb, there was some considerable degree of straining of the soft parts of the popliteal space in bringing the sawed bones in apposition. For adjustment, the anterior splint, together with a short posterior splint, well padded, reaching well above and below the joint, were used. Some days after the operation, unfavorable symptoms developed, such as vomiting, restlessness, and severe stinging pain in the knee, which latter was relieved by hypodermic injections of morphia. Upon examination, a tawny or ash-colored spot was observed below the head of the tibia. The splints were at once removed, when the entire limb from this point downward to the toes presented a gangrenous appearance; but there were no œdema nor marks of pressure from the splint. Above the knee there were natural color and temperature; there was no pain, but profound depression. In nine days after the operation, the patient died.

Upon *post mortem* examination, the upper part of popliteal vein was found to be blocked by a firm plug of fibrin, and further upward, the femoral to the groin contained fusiform matter and broken up clots. There can be but one theory suggested as the cause of gangrene, viz., adhesive inflammation of the vein.

We approach now the question of *excision of the knee in*

cases of compound fracture of the patella. In the year 1870, Mr. Roland read a paper to the Royal Medical and Chirurgical Society, calling especial attention to this subject. Of fifty-six cases of compound fracture of the patella referred to, it was unanimously agreed upon as to the serious character of such accidents, and that there could scarcely be a compound fracture of the patella without there being also a wound or lesion of the knee-joint. The point arose upon the treatment. Should the limb be amputated, or should the joint be excised, or should the injured parts be put at rest for nature to restore as best she may? As to the first query, Mr. Holmes enunciated the opinion that such accidents were not now held to be an absolute indication for amputation. With regard to the second, there was no case on record of such treatment having been carried into effect, and it was evident that its selection must depend on the amount of injury sustained by the soft parts. Whilst in reference to the third, there was no doubt that cases had done well when left alone.

With this review may be mentioned the following:

In July, 1868, a young man, about twenty-three years of age, was thrown violently against an iron railing, by the runaway of a horse attached to a buggy, sustaining some contusions, and more particularly injury to the left knee. Upon careful examination, it was found that the patella was broken into many pieces, with several ragged wounds of the skin, through which communication with the interior of the joint could be readily made, and from which synovial fluid freely escaped. The alternative between resection and amputation was presented to him. We, together with his friends, insisted upon the former to save the limb. Under the influence of chloroform the joint was excised in the usual manner. Six fragments of patella were removed, and also thin sections of the articular surfaces. Every precaution was taken, and the operation was done, in general, antiseptically. At the end of twenty-four hours, everything was satisfactory. In four days afterward, he died. No *post mortem* was held. The result exceedingly disappointed us, taking into consideration the youth of the patient, good surroundings and pure air, and also considering the fact that there was not the slightest evidence of any injury to the internal organs.

Under these circumstances, the question cannot be evaded whether there is not, in these cases of primary excision of large joints, a more continued shock inflicted on the vital forces than in corresponding amputations?

Some three years since, a German, aged about thirty-five years, in a fit of insanity, jumped from an upper window of a house, and coming down upon his right knee, fractured the patella into a number of pieces, leaving him with a large open wound of the skin, communicating freely with the joint; he also fractured his left thigh. The fractured limb was put up in the anterior splint. The injured knee-joint was rendered immovable by a plaster-of-Paris bandage, leaving the wound uncovered except by carbolic dressings. During the union of the fracture of the thigh, excessive inflammation of the interior of the injured knee-joint followed, with profuse suppuration. After union of the femur, resection of the injured knee was made with the removal of thin slices from the bones, together with eight small pieces of patella. In six weeks from the operation, solid union had taken place, and the patient was moving on crutches. The secondary excision was successful, whereas the primary failed.

As to leaving cases of compound fracture of the patella without active interference, the surgeon must be guided by the age of the patient and the extent of injury. After thirty-five years of age, general experience points to the selection of amputation as the preferable procedure. That the joint sooner or later is invariably implicated in these injuries, there cannot be a doubt—a conclusion that should be duly weighed when, at the beginning, this last mode of treatment is selected.

That such cases, from time to time, do well, is certain, and the following may be added in confirmation:

A young man was admitted to hospital, who had been thrown violently on a pointed piece of iron, striking the centre of the patella, fracturing it in a star-shaped manner, and assuredly opening the joint. Several small pieces of bone were removed at the time, and the limb put at rest in plaster-of-Paris bandage. The case did well without any trouble, and in the end the individual was in a better condition than occurs in transverse fracture of the patella; in fact, there was a perfect patella, without any separation of fragments, and, most probably, with even bony union.

ART. V.—**Otorrhœa.** By JOSEPH A. WHITE, M. D., Richmond, Va.,
Late Professor of Eye and Ear Diseases in the Washington University.
(Read before the Richmond Academy of Medicine.)

In these remarks, on such a commonly prevalent trouble as otorrhœa, I may be occupying time that might be turned to more advantage: but trust you will listen patiently to a few old facts which I bring before you in a new dress, with the hope of drawing your attention more closely to a disorder which is easily prevented, or, at any rate, readily controlled in its earlier stages, before it does so much damage to the delicate apparatus of hearing.

Physicians meet with it almost daily in their rounds among their patients; yet, notwithstanding the great importance and danger of this disorder, there seems to be some misapprehension about it. It is lightly regarded, overlooked or passed by as a matter of no importance. Even where its acute form is to be expected, as a rule, no pains are taken to prevent it or cut it short. In scarlet fever, *e. g.*, when the acute ear symptoms are not so transparent that any one would recognize them, they are usually ascribed to cerebral disturbance until the discharge makes its appearance, the brain trouble disappears, and recovery follows. Of those who die, who can say how many died from the ear complication rather than the fever? I have known doctors to tell parents in scarlet fever that it was better to have a deaf than a dead child. This may be so, but I doubt if it would not be a case of *Hobson's choice*. When the discharge has lasted some time and become chronic, and the physician is requested to use his skill to stop the disease, we are often told of a careless reply, intimating that he or she would outgrow it, or of the reprehensible advice not to stop the discharge, because it might strike in, and cause brain trouble—advice unworthy of any member of a profession which to-day traces disease and applies the remedy by clear, logical reasoning from the facts of the case.

If a nasty, disgusting discharge from the ear were in any way a salutary process, no doubt more of us would be among the happy possessors of it. But it is not only an unclean,

unhealthy drain upon the system, but every one so afflicted run hourly danger to life in the acute as in the chronic form, though far more so in the latter than in the former.

Deaths from chronic otitis media purulenta have been, and are still, frequently reported; and there is no doubt that many a case which has died from this disease in its acute stage has been put down to some other disorder. Toynbee, Wilde, and many others since their day, have recorded cases of death from acute otitis media purulenta; that more have not been noted, is due probably to the want of attention to, and examination of the ear in acute inflammations of the drum, and especially where it appears in connection with exanthematous diseases. Many a death in scarlet fever, typhus fever, etc., which takes place with manifestations of cerebral complication, might have been averted if the ear had been examined and the aural trouble properly treated. We all know that chronic aural disease is one of the commonest sequelæ of scarlet fever. Why should we not, then, keep a watch over the ear and treat commencing disease there, *pari passu*, with the systemic affection? By so doing, many a case would recover that would not otherwise do so, and a large majority of those who convalesce with discharge from the ear and deafness, would get well without such an unfortunate result.

When we examine the anatomy of the ear, we can easily see how otitis media purulenta can produce meningitis, cerebral abscess, etc. A purulent inflammation of the tympanum must discharge its products either through the tympanic membrane, or into the mastoid cells, or directly into the brain. It usually bursts through the membrane, but where this is too resistant, it may pass into the mastoid cells, and through their posterior wall communicate with the brain; or it may find its way into the cerebral cavity through the roof of the drum, which is very thin, and often has congenital fissures in it; or through the Fallopian canal, etc. The pain of acute purulent otitis is so violent, as a rule, that it seems to involve the whole side of the head and face, and even intelligent adults cannot sometimes locate it in the ear, thinking they have an attack of neuralgia. In children,

therefore, pain in the head, with fever and apparent head symptoms, should lead us to examine the ear. A reddened, swollen membrane will reveal the cause of the trouble, and appropriate treatment avert the threatening meningitis. Leaving aside any immediate danger to life from acute otitis media, the common form of earache, the slight importance attached to this trouble by physicians at large gives the patient the best chances of becoming a victim of otorrhœa, with impaired hearing, and eventually great destruction of the drum membrane, granulations, polypi, caries, mastoid disease, facial paralysis, and danger of death. It may be laid down as a positive law that no one who has a chronic discharge from the ear is ever free from the danger of cerebral complication and death. And in this connection, it has been suggested by some aurists that insurance companies should either refuse the risk, or demand a higher premium for a risk on a person with this affection.

Where, as a result of chronic otorrhœa, we have caries of the petrous bone, the mode of communication with the brain is apparent. But what is the way of transmission when no caries exist? As I said above, defects frequently exist in the thin roof of the drum, and in the inner wall of the Fallopian canal, by way of which head complication may arise; also, through the posterior wall of the mastoid cells; or, by direct communication with the meatus auditorius internus through the labyrinth; and lastly, by a thrombus of the lateral sinus and internal jugular. Sir William Gull, in a report of seventy-six cases of cerebral abscess, traced twenty-eight of them to chronic tympanic disease, and other writers have reported many cases. In my own individual experience, I have only seen two cases of death from cerebral complication of chronic otorrhœa, and saw them after the head symptoms appeared. In another case (a Dispensary patient), with mastoid complication and slight delirium, I performed Wilde's incision, gouged a hole into the mastoid, and evacuated considerable pus, with relief to the head symptoms, kept the opening patent by a plug, washed out the tympanum and mastoid cells daily for some weeks, and lost sight of my patient before he had recovered from the aural affection.

I have not time to go into the minor details of these cases, but refer to them simply as evidences of my previous statements.

It sometimes happens that, with the advent of head symptoms, the external flow of the discharge ceases, and to this, in all probability, is to be attributed the popular error of thinking it dangerous to stop a discharge from the ear; and this error has been fostered by many physicians who confound cause and effect, concluding that the brain trouble was caused by the stoppage of the discharge, and overlooking the fact that the discharge ceased because it found a new outlet and caused the brain complication.

It is hardly necessary to go into the minute symptomology of acute and chronic otitis media purulenta.

The acute form is of very common occurrence. We are all familiar with the violent earaches so frequently met with, ending in discharge from the ear, which relieves the pain, as a rule; what we so often hear spoken of as a rising in the ear.

The statistics collected by Dr. Knapp show this affection to occur in aural practice in about 6 to 7 per cent. of all the diseases of the ear. But it is hardly a correct estimate, because, on account of the little importance attached to it by the profession at large, the aurist is called upon in only a comparatively small number of such cases; and this is more especially so where it occurs in connection with the exanthemata. It is more frequent among children than adults, probably because they are more exposed to its causes—notably these same exanthematous diseases.

It is caused, in my own experience, by inflammation of the naso-pharyngeal mucous membrane, by exanthematous diseases, diphtheria, mumps, eczema of ear, cold water entering the ear from bathing, or improper use of nasal douche, etc., and from vegetable fungi in the external meatus. It usually commences with a feeling of discomfort, fullness and throbbing about the ear, which passes into acute pain of greater or less intensity. The drum-head is congested or reddened, and within a week, as a rule, assumes a sudden bulging appearance, ruptures, and pus is discharged from the tympa-

num. Usually, with the discharge the pain ceases; if it does not, it is because the exit for the pus is too small, or because there is mastoid or cerebral complications.

Sometimes the pain has a markedly intermittent character like malarial disorders.

The duration of the discharge which makes its appearance is varying in Knapp's cases from three days to an indefinite period—nearly one-fourth of them passing into the chronic stage. But about 80 per cent. of these cases, under appropriate treatment, recovered without impairment of hearing, and with closure of the perforation. When the discharge ceases, the perforation in the drum-head is not always closed, and the patient should still be treated in order to heal up this opening. Although, contrary to common opinion, a "hole in the drum," as it is usually called, does not necessarily entail any marked loss of hearing, there is no special advantage in having one except under certain conditions of chronic non-suppurative aural catarrh, and the endeavor should be made to heal the breach. The membrana tympani possesses great powers of repair, and although the middle layer is not regenerated when there has been great destruction of tissue, the opening closes by growth of its inner and outer layers from the edge of its perforation towards its centre.

I have seen one-third of the membrane destroyed, and the loss closed up completely by tissue, which serves very well the same purposes as the rest of the membrane, and protects the delicate structures of the drum. As long as the perforation remains open, the drum is exposed to outside influences, against which it should be protected.

As regards treatment of these acute cases, it should be such as we employ to reduce any violent inflammation. Put the patient to bed, for quiet repose helps materially to favor a rapid cure; and where the hearing, and even life, may be imperilled by the neglect of proper caution, we should impress the necessity of rest upon such adults as may be the victims, or on those in authority over children. Astringent applications to the naso-pharyngeal mucous membrane in the form of sprays, gargles, etc., should be made use of. Inflation of the Eustachian tubes by Politzer's method of cathe-

ter should be employed; and here we should go cautiously, feeling our way, so as not to drive air too forcibly into the drum until we see how it will be borne. I have often seen the pain instantly relieved by this method alone, or with the additional help of hot water in the external meatus, without recourse to leeching. The pain in the ear, which so often accompanies acute tonsillitis, is nearly always relieved by a simple inflation of the Eustachian tubes.

If the inflation and hot water do not relieve the patient, and we find the membrana tympani reddened, from two to six or eight leeches (not over the mastoid, but over the tragus, and just under the auricle) should be applied, and the bleeding encouraged by warm flannels afterwards. When it happens that leeches are not to be had, the instillation of Majendie's solution of morphia warm into the ear, or a four-grain solution of sulphate of atropine, or both combined, often has a beneficial effect. If the pain still continues, and the inflammatory action tends to the formation of pus, the examination of the membrane will show it to be bulging outward, and it should be freely incised, generally in the inferior posterior quadrant, to give exit to the contents of the drum. Sometimes I have been obliged, in rare instances, to have recourse to warm poultices to give relief, but never do so if I can avoid it; for, as Dr. Knapp says, this is a heretical proceeding, though he has often found it of service, and it is well borne. Paracentesis of the drum membrane should only be done with good illumination from the head-mirror, and the point of the knife carefully watched—otherwise more harm than good will come of it. Where, notwithstanding an exit for pus and its flow from the external meatus, the pain continues, if we find redness and pain on pressure over the mastoid process, a vertical cut about an inch behind the attachment of the auricle, and an inch in length down to the bone, called Wilde's incision, will nearly always give relief. It is rarely necessary to perforate the bone, but if cerebral symptoms threaten, no time should be lost in doing so.

I have here given you a short and concise statement of the *modus operandi* of handling such cases, and if these points are attended to in this complication of the exanthema

mata, probably many lives, and, undoubtedly, many ears, would be saved. When the pus appears, frequent and gentle syringing with hot water is necessary until all acute symptoms have subsided, and then a weak, astringent solution of zinc, nitrate of silver, etc., may be dropped into the ear several times daily after the syringing.

Those who do not recover with closure of the perforation and restoration of hearing, generally pass into the chronic form of otorrhœa, a common and often intractable affection, with a number of attendant evils in its train.

The discharge becomes offensive in character, the hearing gradually worse, granulations, polypi or caries may complicate the case, with total destruction of the drum membrane and chain of ossicles; or with inflammation of the mastoid cells and danger of cerebral disease. In fact, these cases do not fall into the hands of the aurist until the deafness, the offensiveness of the discharge, or some other more prominent symptoms than the mere running from the ear, compels a consultation. As a rule, a simple uncomplicated case of chronic otorrhœa is a very tractable disease, yielding readily to careful and repeated cleansing, the persevering application of astringents, keeping the Eustachian tube and drum free by Valsalva's or Politzer's method of inflation, and with rational treatment of the naso-pharyngeal mucous membrane.

The application of blisters to the mastoid process is a time-honored custom—more honored in the breach than in the observance. The uselessness of counter-irritation in this affection is easily appreciated when we take into consideration the location of the drum, imbedded, as it is, in the petrous bone; and, therefore, blisters have been long since discarded from aural therapeutics. They belong to the same class of empirical remedies as the common custom of piercing the lobe of the ear for sore eyes, and only makes the patient more uncomfortable than before.

Many of these cases in children are associated with chronic nasal catarrh, especially in those of a strumous type. These, and, in fact, nearly all the subjects of chronic otorrhœa, should be put on tonics and alteratives internally. Patient care and attention is nearly always re-

warded by a successful termination of the affection. Occasionally, relapses will occur, ushered in by an acute attack, but the eventual result is almost a certainty.

The seemingly intractable cases are those with granulation, polypi and caries. To expect a good result here, we must repeatedly examine the ear with a good illumination, carefully destroy the granulations which spring up again and again, remove the polypi and destroy the roots, scrape away with a scoop any carious bone we can get at, and then treat the case as a simple otorrhœa. I generally remove any exuberant granulation or polypi with the polypus forceps, destroying small granulations, and touching the roots of the polypi with pure nitrate of silver fused on an aluminum rod, or with pure chromic acid on the cotton-holder. Nitric acid, chloro-acetic acid, and the galvano-cautery are also used for the same purpose. Then patient cleansing and perseverance will accomplish a good result.

Sometimes the opening in the drum-head is too small for the free evacuation of the pus; or the perforation may be quite large enough, but filled up by large granulations or polypoid formations, which prevent free flow of the purulent secretion, and it is in such cases, as well as in those with caries, that mastoid disease or cerebral complications make their appearance. Sometimes an ear, which has been discharging freely for a long time, suddenly ceases to run, and this cessation is often followed by discomfort or pain about the ear, with swimming in the head, etc. The examination may reveal a granular or polypoid mass filling up the opening in the drum-head, or we may find that the edges of the opening have become attached to the opposite wall of the drum cavity, and that although inflation will not give the characteristic perforation whistle, still a drop of pus may ooze out upon the membrane from within. In the one case we must remove the foreign growth at once, and in the other, if the uncomfortable symptoms continue, we must either loosen the edges of the perforation from its adhesions, or make a new exit for the pus in the membrane.

The first case I treated in Richmond was a young man, twenty-three years old, who had had fetid discharge from the

ear since childhood, from scarlet fever. He could hear a forty-inch watch only when pressed against the side of his head. He had suffered for some time past with great dizziness, so as to be often compelled to sit down when working, for fear of falling. From the right ear I removed on July 25th, two polypi each as large as a pea, and three smaller ones; on the 27th, I removed four more; burnt the roots with chromic acid; saw him three times a week for six weeks; gave him an astringent gargle, and a sulphate of zinc and carbolic acid lotion for his ear, to be applied three times daily, after careful syringing. From time to time I destroyed any granulations which appeared, and at the end of September, dismissed him with no signs of discharge from the ear, a clean drum membrane, with a small perforation, and hearing for the same watch twenty-four inches. Up to this time he has had no relapse. Since then, I have had about twenty cases under treatment, with varying success. All have improved; some have been dismissed cured, and the rest are still under treatment. Among these, I have seen no case of any great disease of the bone. In a few, slight caries was present. As yet, I have not met in this city with any brain or mastoid complications of this disease.

Of the forty-four cases of otorrhœa seen in my office since January, fully one-half had granulations in the drum; four, had polypi; three, caries; one, necrosis of anterior wall of the drum; and two, mastoid disease.

Healing of the perforation has occurred in some cases, but most of them, though the opening became smaller, did not close. Among the cases, was one, a lady forty-eight years old, from a county of this State, who had had foetid discharge from the ear since sixteen years of age, with occasional attacks of pain and great deafness. She could, with difficulty, distinguish the tick of a forty-inch watch when pressed up against the side of her head. I removed two large polypi, and found that the drum-head was entirely destroyed, the malleus and incus gone, leaving the stapes in the oval window. After three months treatment, the discharge ceased, the mucous lining of the drum became apparently normal, and the hearing for both voice and watch very good, showing

that even a total absence of the drum-head with part of the chain of ossicles, does not necessarily imply deafness. In some cases, with large perforation after the discharge ceased, the insertion of a small wet pellet of cotton in contact with the remnants of the membrane, improved the hearing by acting as a conductor of sound, and helped to protect the exposed drum cavity from atmospheric changes. This is the way the artificial drum-head acts, but the cotton takes the place very well. In reference to artificial drums, I often meet with patients who have expended their money for patent drums, which are guaranteed to restore the hearing, without knowing whether they are appropriate subjects for such an aid or not. Most frequently they are cases of non-suppurative chronic aural catarrh, with intact, thickened and depressed membrane, where no artificial drum can be of service.

These, however, are only a very small number of those who are daily victimized by quack nostrums for aural diseases, and not only spend money uselessly, but are more injured than benefitted by the remedies they buy and the pretended aurists they apply to. A more general knowledge of ear troubles among the profession at large would go far towards protecting their patients against this improper tampering with such an important organ, and conduce to more rational treatment of its diseases.

Clinical Reports.

Inversion of the Uterus in a Girl, Presenting Singular Features.* By R. W. NELSON, M. D., Charlottesville, Va.

I wish to present the history of a case of inversion of the uterus, rare under any circumstances, but especially interesting in this case, as it occurred in a girl who had never been pregnant, and had never had any polypus or other growth connected with the womb.

*Read before the Medical Society of Virginia at its session in Alexandria, October 22d, 1879; and by vote of the Committee on Publications, referred to the author, with the recommendation that he should contribute the report to some regular medical journal of his selection. At the request of the Editor, Dr. Nelson has kindly contributed it to the *Medical Monthly*.

On *October 13*, a colored girl was brought into my office by her mother, who stated that her daughter was suffering with uterine trouble, and that something was actually protruding from the vulva. On examination, the protruded mass was found to be the uterus, which was almost completely inverted, or I think I might, with more propriety, say *everted*.

The girl was eighteen years of age, of medium size, fairly developed, and apparently in good health. She had never suffered from menorrhagia, and had, indeed, always been regular in this respect. She menstruated last on August 28. I could get no history which threw any light on the time or mode of occurrence of the inversion.

The uterus projected so far that the vagina formed only a shallow sulcus, just within the labia minora. The inversion was complete, except for a shallow pit at the fundus, which was less than a half inch deep. A circular abrasion was observed near the fundus, which I thought was probably occasioned by the rubbing of the clothing against the prolapsed mass. With this exception, nothing abnormal was discovered in the condition of the mucous membrane—although the examination was made by gas light. The fore fingers of the right and left hands could be passed just inside the labia minora on each side, and then approximated above the inverted uterus, and only the vaginal walls intervening between the finger tips were felt. The muscular tonicity of the organ seemed completely lost—having to the finger the feeling of a piece of wet felt.

In this instance, inversion must have occurred, as suggested by Prof. J. E. Taylor, “beginning at the cervix—this part undergoing eversion as in prolapsus, and thus going on to complete inversion of the entire organ.” “In previous literature”—I quote from Thomas—“allusions to the possibility of inversions after this method may be found. Klob alluded to it in these words: ‘A very remarkable class of cases of inversion are those in which, without efficient cause, an inversion of the cervix takes place into the vagina, drawing the fornix of the latter with it, and thus forming a polypos-like tumor in the cavity of the vagina, which may reach down to the vulva, at the lower part of which the internal orifice is situated.’”

A very striking case was published by Mr. Wm. Lawrence, in the *London Medical Gazette*, December 5th, 1838, under the

head of "Spontaneous Partial Inversion of the Uterus;" but the credit of having drawn proper attention to the subject, and having proclaimed its probable pathological bearings, unquestionably belongs to Taylor.

To remedy the displacement in my case, I gently grasped the tumor, and readily returned it within the vulva; then by pressure with the fingers, aided by a large-sized, round-pointed catheter, I pressed against the fundus, and the displacement was corrected. For want of a better appliance, Hodge's open lever pessary was introduced, and the patient sent home and put to bed.

The next day, the os and cervix were so much relaxed that the fore finger could readily be passed up to the fundus. The pessary was removed, and astringent applications and the hot douche were used.

On the fourth day, my friend, Dr. W. C. Dabney, visited the case with me, and a very thorough examination was made, both with the finger and with the speculum. The uterus was still very much relaxed, and the lips were gaping so widely that the os internum was where the os externum should have been; and the arbor vitæ structure of the cervix was plainly visible. The os and cervix were inflamed, and granulations surrounded the os internum. The hot douche, along with local applications of nitrate of silver or tincture of iodine, were determined upon, and the following pill was directed three times a day:

Ry. Ext. nux vomica.....gr. $\frac{1}{6}$
 Solid ext. ergot.....
 Sulphate of iron (dry).... $\frac{aa}{gr. j}$ —M.*

So far as I am aware, none of the recent writers on gynecology, with the exception of Thomas, and possibly Barnes, refer to inversion, except as a result of labor or morbid growths.

Glycerin, according to Mr. Shoemaker (*Amer. Jour. Pharm.*) in 1848, sold for \$4 a pound; now it is produced for 18 cts. a pound. Brewers, it is said, use most of it. Over 40,000 pounds are said to be annually consumed in this country in the manufacture of beer.

*As we are going to press with the above report, we have a note from Dr. Nelson, stating that under the treatment above described, his patient has entirely recovered, and has resumed her avocation—that of a house-servant.—EDITOR.

Burn Successfully treated by Bicarbonate of Soda. By WM. B. CONWAY, M. D., Surgeon to the Virginia Agricultural and Mechanical College, etc., Blacksburg, Va.

This case is rather an unusual one, the burn having occurred under very unfavorable circumstances, as the following statements will show :

On the 28th *March*, 1878, I delivered Mrs. — of an apparently healthy female child, whose father I had treated for tertiary syphilis a few months before its birth. I was called to see the child two months after its birth, and found it afflicted with congenital syphilis—suffering with the following symptoms, viz.: hoarse voice, discharge from the nostrils, copper-colored blotches or ulcers, especially about the anus and pudenda, and somewhat emaciated. The usual remedies for syphilis were employed, and in a few months the little unfortunate seemed to be fully restored to health.

During the month of *August*, 1879, I was called to see the same child, and found it suffering with cholera infantum, from the effects of which it had scarcely recovered, when it received the following burns, occurring on the 21st October: Its mother, in attempting to lift a vessel of boiling water from the stove, unfortunately upset it, pouring the entire contents upon the child, fearfully scalding one side of the body, including the head and arm. Care was taken in removing the clothes; hence the cuticle was broken in but few places.

Classifying the burn as one of the second degree, and considering the unfortunate circumstances that had attended the child from its birth, my prognosis was, of course, unfavorable. However, I adopted the following treatment: I gave opium, gr. $\frac{1}{4}$, repeated every two or three hours, to relieve the intense pain; forbade anything but a milk diet; opened the vesicles, clipping the larger ones with scissors, and pricking the smaller ones with a needle. Locally, I applied a solution of bicarbonate of soda, upon cloths, keeping them constantly saturated with the solution; the applications were renewed every four hours. This treatment was kept up for twenty-four hours, at the expiration of which time, the soda was dispensed with—the burns being in a healthy condition and inflammation having entirely subsided, and there was no discharge and no smell.

Having seen several cases reported wherein soda was used under similar circumstances, I have been reminded to write this.

Antiseptic Surgery, as Illustrated by a Case of Inflammation of the Femur in a Child Eleven Years Old, Terminating in Necrosis Exfoliation and Abscess, with Complete Breaking Down of the Surrounding Tissues, Involving the Artery Vein and Nerve—Amputation at the Upper Third—Recovery. Reported by Dr. W. J. JONES, Waynesboro, Va.*

On September 4th, 1879, I was called to see Julia, a little daughter of Mr. John C. Koimer, in Augusta county, Va., whom I found suffering with what I at first thought to be *synovitis* of the right knee-joint. The integuments about the knee, above and below, were swollen, red and hot, and the slightest movement or touch produced intense pain.

The history of the case, which I gathered from the family, was, that in the month of January last, she tripped and fell on the ice. For a few days succeeding the fall, there was slight local tenderness and fever. The mother applied some simple domestic remedies, and the congestion soon disappeared. The pain, however, continued in a modified degree. Sometimes it was worse than others. Locomotion was not apparently impaired, except in going up a stairway or steep hill, when there was a little lameness with increased pain, of which the child otherwise seldom complained.

During the month of *August*, her father had a man engaged in sinking a well, and the children were allowed to play in the mud and water thrown out of the excavation. This little girl contracted cold, which, as her mother expressed it, "settled in her knee." No medical aid was thought to be necessary, however, until the 4th day of September, when I found her in the condition above described.

I directed the application of warm poultices and anodyne liniments, and treated the sympathetic fever on general principles. The next day, I applied Smith's anterior splint, and swung the limb by means of cord and pulley. Opiates were administered as indicated, though the quantity required was not large. By the 18th, I had succeeded in allaying both general and local fever. Previous to this, however, the swelling had disappeared from below the knee and moved upwards, involving the whole thigh. The pain was now referred to the hip joint, which was greatly aggravated by the

*Read before the Medical Society of Virginia at its session in Alexandria, October 22d, 1879; and by vote of the Committee on Publications, referred to the author, with the recommendation that he should contribute the report to some regular medical journal of his selection. At the request of the Editor, Dr. Jones has kindly contributed it to the *Medical Monthly*.

slightest touch or movement. A fluctuating point was discovered about one and a-half inches above the knee joint on the inner and anterior aspect.

On the 20th, I requested Dr. John St. P. Gibson, of Staunton, to see the patient with me for the purpose of aspirating, in order to determine the character of the collected matter. Having chloroformed the patient and prepared an aspirator, temporarily devised by Dr. Gibson, the needle was plunged into the thigh at the fluctuating point. About two ounces of pure pus was the result. For several days succeeding this operation, the little sufferer experienced great relief—so much, indeed, as to make the mother rejoice in prospect of a speedy recovery.

On the 23d, the pain returned; and on the 25th, she was a little hectic, while the sac of the abscess was rapidly refilling. The condition of the child at this time demanded the free opening of the abscess.

Accordingly, on the afternoon of the 27th, Dr. Gibson and I, in company with Dr. J. S. Myers, of Waynesboro, visited the patient, prepared to operate antiseptically. We carried with us one hand and two steam atomizers, and a sufficiency of gauze protector, etc. Our intention was to make a free incision, wash out the sac with carbolic acid solution, introduce a drainage tube, and dress the wound in accordance with Lister's method. Having chloroformed the patient, and moved her to a convenient bed, we exposed the limb and set the atomizers to work. Everything being in readiness, Dr. Gibson pressed the matter from below upwards, and with a long, straight bistoury made a free but comparatively shallow opening into the abscess. There was a spurt of blood, which, in color, resembled a mixture of arterial and venous, and the Doctor remarked, "*I have cut something*," supposing he had cut one of the small branches of the inferior muscular artery. He immediately introduced his finger, and found the point of the knife had barely entered the sac of the abscess. Into this small opening he pressed his finger, which, on withdrawal, was followed by a gush of pus and blood intimately mixed, which was immediately succeeded by a jet of arterial blood that we all well knew proceeded from the popliteal. I immediately placed my thumbs upon the femoral artery, and pressed it firmly against the pubic bone until the application of a tourniquet was completed. Then, introducing my index finger into the wound, I found the femur completely denuded of all tissue as far up as I could reach, and extending around its whole circumference. The bone

was dead fully one-half its length, and the blood-vessels were ruptured. The simultaneous question was, "What shall we do?" and the only possible answer, "Amputate." Here we were in a room after night; a little girl before us partially under the influence of chloroform. Her right femur, for about seven inches of its length, was in a state of necrosis and exfoliation; the bone was ulcerated, and the periosteum and cellular tissue were completely destroyed; the artery vein and nerve were rotted in two; her system was run down by this great drain upon it, until she had reached a hectic condition. No member of the family was present, but scattered in the yard and adjoining rooms, weeping and mourning in sorrow for the only daughter; no amputating case was nearer than four miles, and not even a neighbor to witness what we did. It was enough to demoralize the bravest man, and palsy the hand of the most skillful surgeon. However, we acted promptly.

Having first dispatched a servant for an amputating case (it being 8 o'clock), we thoroughly chloroformed the little patient, and by 10 o'clock had completed the operation. We amputated at the upper third, using the circular method, dressed the stump under carbolic spray, and wrapped it in antiseptic gauze, expecting all the time to have for our companion and witness the grim monster from the region of the tombs. At one time, the patient was pulseless, and seemed to be *in articulo mortis*. By stimulating with brandy and subcutaneous injections of sulphuric ether, she reacted in thirty-six hours. On the third day, I dressed the stump, and thereafter every day used the atomizer and the protector gauze, etc., prepared antiseptically.

Up to this time (Oct. 21st) she has had no untoward symptom. For diet, I have used mutton and beef tea, with a little bread, and a little of the meat. No drugs have been administered since the amputation, with the exception of one-sixteenth of a grain of morphia immediately after the operation, and a similar dose during the succeeding night. She has regularly slept well, and called for more to eat than was prudent to give her. The stump has almost entirely healed, and the patient is able to sit up and turn herself from side to side in bed. The amount of suppuration during the whole healing process will not exceed one ounce. Without the antiseptics she could not have survived. With them, she has recovered more rapidly than a healthy subject would have done under the old methods of treatment.

In regard to the resemblance to synovitis at first, I suppose

the inflammation in the bone so near the epiphysis caused an increased secretion of synovial fluid which was afterwards absorbed. This child has a scrofulous diathesis. I think the fall on the ice in January may have cracked the bone, which never healed, but by a low, chronic, inflammatory process proceeded to necrosis. The mother, perhaps, properly expressed it when she said the cold contracted by the child settled at this weak point. Acute inflammation of the periosteum and surrounding tissues was thereby excited with the results heretofore cited.

The most important point in this case, however, is the fact that the antiseptic treatment saved the life of the patient, when no other plan known to the profession could have done so.

Correspondence.

Treatment of Ingrowing Toe-Nail.

Mr. Editor,—In the proceedings of the Richmond Academy of Medicine, as reported in the December number of the *Medical Monthly*, I read, with special interest, your remarks on the treatment of “ingrowing toe-nail,” which have awakened some thoughts upon this very common and troublesome affection. Having in my youth had a painful personal experience of this condition, it, like the necessity that invents, tended to sharpen my wits and devise means of relief.

Every practitioner is familiar with the heroic treatment used in cases of ingrowing toe-nail twenty or thirty years ago, viz., that of avulsion, or forcing the scissors blade beneath the nail, cutting through the centre to the base, tearing out the divided parts with “bull-dog forceps,” cauterizing the matrix with the solid stick of argenti nitras. The thought of this painful operation, so frequently witnessed in clinics and hospitals twenty-five or thirty years ago, even now provokes an involuntary shudder.

Having been, as already said, a sufferer from an ingrowing toe-nail of several years’ standing, after exhausting the va-

rious plans of scraping the nail, centre and side, squaring and notching the free extremity, lifting the edge with cotton, lint and cork, painting the surface with tincture of iodine, iron and nitrate of silver, removal of pressure, and absolute rest, all without permanent relief, I determined to give the offending member the benefit of a new operation. "Screwing my courage up to the cutting point," the sensibility of the hypertrophied mass was deadened by firm pressure, and with a sharp-pointed bistoury the base was transfixed, and, with one smooth outward cut, the work was done in a few seconds that years of temporizing had failed to accomplish. The diseased growth was removed, the edge of the nail was freed, and a few days' patience perfected the cure. I have operated several times after this plan in the last twenty years with the most satisfactory results.

I know every case of ingrowing toe-nail does not demand this treatment, for there are different phases of the disease, as well as anatomical peculiarities that influence and must decide the treatment. What we have to do is to exercise our best judgment, and keep before our minds, not only the pathological condition of the parts, but the therapeutical principles in the treatment of local congestion, inflammation and ulceration. As a general rule, where operative interference is demanded, some preparatory treatment will be required to reduce swelling and inflammation, such as the use of astringent lotions. A saturated solution of alum in hot water may be applied as advised by Mr. Ure; or poultices of oak bark, lightly touching the granulations with Monsell's solution of sulphate of iron, or the solid stick of nitrate of silver. Or, what is better, the use of a solution of caustic potash as advised by Fanning, in the *Southern Medical Record*.

R̄ Liquor potassæ.....5iij
 Aqua distillat.....5j

Mix, and apply twice a day.

After the granulations have been cut down, insert under the edge of the nail small pieces of compressed sponge the size of a grain of wheat. A patient perseverance in this line of treatment will be rewarded.

A few weeks since, I was called in consultation to decide

the best treatment of one of the most aggravating cases of ingrowing nail of both great toes that has come under my observation for years. The patient, a young man, aged 17 years, was rendered *hors du combat*. So extensive was the hypertrophy and granulations on each side of the nail, that they were seemingly buried beneath the exuberance of the granulations. The oak-bark poultice was advised, several applications of which greatly relieved the inflammation and swelling, and so improved the general condition of the toes as to admit the application of the caustic potash—which, I presume, has been faithfully and efficiently applied, as I have seen the young gentleman recently on the street. The case is still under treatment.

Respectfully yours,

J. E. CHANCELLOR, M. D.

University of Virginia, Dec. 1879.

Dr. Mussey's Prescription for Dysmenorrhœa.

Mr. Editor,—On opening the last number of the *Medical Monthly* this evening, almost the first item that met the eye was the following:

“That during a discussion on dysmenorrhœa in the Ohio Medical Society, Dr. W. H. Mussey stated that the following formula was very efficacious in all forms of dysmenorrhœa:”

R. Pulveris guaiaci resinæ.

Terebinthinæ canadensis..... $\overline{\text{an}}$ ʒj.

Olei sassafras.....ʒij.

Alcoholis.....ʒviij.

Macerate for seven days and filter (not strain); then add hydrargyri chloridi corrosive, ʒj.”

This is the well known prescription of Dr. Faulk, in his work on *Diseases of Women*, translated from the German in 1844. The same prescription will be found in old editions of “*Griffith's Formulary*.” It is the same formula alluded to by the writer in a paper on Exophthalmic Goitre under the name of “*Tinct. Antacid*,” published in 1874.

This name is given by Faulk and Griffith, and is also mentioned in a recent paper of the writer's on Medicated Pessary. Therefore, we presume Dr. Mussey did not give it as an original prescription. It was at first used as a prescription

in secondary syphilis. I have constantly prescribed it for twenty years, in amenorrhœa and dysmenorrhœa, with almost complete success in both troubles. As an alterative emmenagogue it has no equal. Dose from fifteen to thirty drops.

Yours truly, J. P. THOMAS, M. D.

Pembroke, Ky., December 8th, 1879.

An Informal Report of the Proceedings of the King William County [Va.] Medical Association.

Mr. Editor,—Matters of general professional interest frequently occur in the practice of country physicians, which I think should be recorded for the common good. At least, thinking so myself, I take the liberty of sending you the following notes of recent occurrences in this section of the State.*

Case of Bloody Sweat.—Among a number of interesting cases reported at the last meeting of the King William County Medical Association, was one by Dr. R. G. Hill, of "bloody sweat," the subject being a boy four years of age, suffering from malarial fever. During each sweating stage, blood oozed from the face and neck. Febrifuges, followed by quinine, afforded relief; but two months later he was taken with hæmorrhage from the alimentary canal. This condition

*The Editor, in most cheerfully giving place to this communication, would take occasion to say that the contents of this letter will illustrate how much *country* practitioners can contribute to the good of the profession if they would only make notes of their cases for the journals. Simply the record of the cases, as in this letter, of "Bloody Sweat," the "Spontaneous Expulsion of a Uterine Fibroid," and the calling of attention to the use of salicylic acid in the treatment of indolent ulcers, are important practical matters—useful and instructive to most of the readers of any medical journal. But perhaps these records would not have been made had there not been the King William County Medical Association. Such Associations, when properly organized, are wonderful promoters of professional good—stimulating members to the study of their cases, to a recognition of the importance of the "rare" cases, and to an appreciation of the importance of recording all valuable facts.

What has been done by the energetic members of the profession in King William County, Va., can be accomplished by the regular physicians in almost every other county in this and other States. Cases of rare interest, and suggestions as practical, are ever and anon occurring in the experience of physicians in every section; but records of which are seldom made, simply because of the want of County Societies.

If this note can have the effect of awakening the country profession of the Southern States especially to the value of local organizations—not simply nor even principally to discuss questions of ethics, but for the purposes of giving and seeking information regarding the treatment of diseases, the reports of cases of interest, etc., the Editor will feel that good has been done.

was accompanied with both vomiting and purging of blood, from which he died. No autopsy.

Spontaneous Expulsion of Uterine Fibroid.—Dr. Hill also exhibited a fibroid tumor about the size and shape of a large Bartlett pear, which was expelled from the womb. The doctor was called in to arrest the hæmorrhage, which was profuse after its expulsion.

Successful Removal of Malignant Tumor from the Neck.—At the same meeting, I had the pleasure of reporting the successful removal of a malignant tumor from the side of the neck. Patient, male; aged about sixty; no occupation. The tumor occupied a space extending from the lobe of the ear (which was pressed upwards by the upper edge of the tumor), downward to about the level of the thyroid cartilage. Anteriorly it overlapped the ramus and angle of the jaw, and extended posteriorly to the anterior edge of the trapezius muscle. Above, the tumor had softened and ulcerated, and involved the lower half of the parotid gland, and the upper portion of the sterno-cleido-mastoid muscle. Below, it was in contact with, and dipped behind that muscle, occupying the space between it and the scaleni muscles. The operation was tedious; owing to the fact that the tumor was so softened that it had to be removed almost entirely by aid of the scalpel. The anæsthetic (chloroform) was most satisfactorily administered by Dr. J. T. Jones; and Dr. J. B. Moore rendered me all the assistance that could be desired. At last accounts, three weeks after the operation, the patient was doing well.

Salicylic Acid as a Local Remedy for Ulcers.—I wish to call the attention of the profession to the use of salicylic acid as a local remedy in ulcers. During the last three years I have used it on weak, indolent and inflamed ulcers (perhaps a dozen cases in all) with the most gratifying results. One case I will mention particularly: A young man, in delicate health, had an ulcer of the leg of about eighteen months standing. He had been under the treatment of two other physicians, and various remedies had been used without benefit. In one week from the commencement of the salicylic dressing, the ulcer was cured.

I simply sprinkle the dry acid over the whole surface of the ulcer, after thoroughly cleansing it with soap and water. It allays irritation, and stimulates the weakened tissues to a healthy condition. In recent ulcers, two or three applications will generally suffice. The dressing should be renewed at least twice a day; or oftener if the ulcer is weak and very foul.

I have also used it with equally good results in one case of primary syphilis. Under its influence, the chancre healed kindly and rapidly, without enlargement of the inguinal glands. Mercury was, of course, used internally to prevent secondary symptoms. I hope some of the readers of your journal may be induced to give the acid a trial in such cases, as I am sure there is no known agent that will give such satisfactory results. But I must not conclude without giving one caution, viz.: If there is any reason why an ulcer should *not* be healed, such as extreme age, etc., let no consideration induce the physician to apply the acid; for so surely as you do, so *certainly* will the ulcer be healed.

Very truly yours, GEO. WM. POLLARD, M. D.
Aylett's, King William Co., Va., Nov. 25th, 1879.

Tobacco in Dyspepsia.—Treatment of Ingrowing Toe-Nail.

Mr. Editor,—The proceedings of the Richmond Academy of Medicine, published in your December number, is an exceedingly interesting summary. We country doctors lose much in not having the benefit of such organizations. It is true we have a Medical Society, but it is twenty miles off and only meets once in three months. Does this not seem like “pursuing pleasure under difficulties?”

There are two subjects mentioned in your proceedings upon which I would like to have a word—tobacco and ingrowing nail. Tobacco, doubtless, does some harm to the human family, but I believe many are benefitted by its use. My own father was a martyr to dyspepsia from boyhood up to thirty, when he began using tobacco, and has since been as hearty as any one. Judge W., now about eighty years of age, told me that from early manhood to forty he was never free from dyspepsia, and for years had a constant pain resulting therefrom. One day he was riding horseback in company with a neighbor, and was taken with a violent toothache; his neighbor, who used tobacco, induced him to apply a piece to his tooth, which not only relieved the toothache, but mitigated the pain in his stomach, and other dyspeptic symptoms to such an extent, that he determined to use tobacco from that time. In three weeks he had not a dyspeptic symptom.

Quite an intelligent gentleman tells me he uses tobacco to

relieve him of constipation. He says he knows of many persons having been cured of dyspepsia by its use. Last summer his wife suffered for more than two months from dyspepsia; at last she took his advice and smoked a small cigarette after each meal; she told me she improved from the start, and in a short time was well. She stopped smoking, but the dyspepsia did not return.

The treatment of ingrowing nail by cutting away the adventitious tissue, was the subject of my medical thesis when I graduated in 1876. I had known of the operation being performed by a young lady upon herself with her brother's razor. Although this seemed so simple and comparatively painless, neither my own text-books or those of my fellow students mentioned the operation. Since then, I have seen it in Malgaigne's *Operative Surgery* (published in 1851). He says "it was long ago used by the Arabs, described by A. Paré, renewed by MM. Lisfranc, Brachet and Levrat Perroton." I have treated ingrowing nail successfully by applying, once a week, a few drops of carbolic acid, allowing it to run down between the nail and adventitious tissue; let the nail grow and it will soon cut its way out in front, without pain or soreness; and all that is now necessary, is to wear the nail trimmed long on that side, and the trouble will not recur.

Respectfully, JESSE EWELL, JR., M. D.

Hickory Grove, Prince William Co., Va., Dec., 1879.

Correction Regarding Case of Arsenical Poisoning.

Mr. Editor,—On page 747 of your December number, 1879, reference is made to the careless use of arsenious acid by a Brooklyn dentist. The whole thing was a tremendous mistake perpetrated by a reporter on one of the daily papers, and it is hardly fair to leave the Brooklyn dentists as branded in that way. We call your attention to the first article in the October number of the *Dental Miscellany*, page 367; also, to the discussion of the case on page 384 and following, and 391. The case was a very singular one, but turns out not to be a case of arsenical poisoning. Also, see *Missouri Dental Journal* for September, page 520.

Yours truly,

JOHNSTON BROS.

New York, Dec. 15, 1879.

Original Translations.

From the German and French. By WM. C. DABNEY, M. D.,
Charlottesville, Va.

The Value of Benzoate of Soda in Diphtheria.—Dr. Gräндinger (*Rundschau*, October, 1879) was induced to try benzoate of soda in diphtheria by the encomiums heaped upon it by Klebs and Letzerich. His observations were made in one of the hospitals for children in Vienna. The doses in which the medicine was administered were those recommended by Letzerich, namely, to children of one year old, 5.0 grammes; children from one to three, 7.0 to 8.0 grammes; children from three to seven, 8.0 to 10.0 grammes; children over seven, 10.0 to 15.0 grammes of benzoate of soda, dissolved in from 80 to 110 grammes of water.

Besides this internal use of the drug, the substance was dusted directly on the diseased throat two or three times a day.

The other treatment of the little patients was precisely the same as was used when other medicines, such as ice, chlorate of potash, stimulants, etc., were employed.

Of the *seventeen* patients subjected to this treatment, *eight* died.

Besides these seventeen cases, there were admitted in St. Anno Hospital, from the 1st of January to the 15th of June, *seventy-six* other cases of the disease who were treated in the old way—with ice, chlorate of potash and stimulants. Of these, *forty-nine* recovered and *twenty-five* died; two were still under treatment when Dr. Gräндinger's paper was written. The results are very different from those of Letzerich.

Gräндinger considers the action of the benzoate under the following heads:

1. Has the benzoate of soda a peculiar influence on the removal of the membrane when once formed? Of the ten cases which recovered, the deposit was removed on the third day in six cases; on the fifth day in one case; in the other three cases it persisted to form thirteen to twenty days.

2. Does the benzoate of soda check the extension of the false membrane? In five cases there was no further extension, a result which certainly is no better than that frequently obtained by other modes of treatment. In five other cases, the extension was not checked in the least; in five it extended to the air passages in spite of the treatment. In four cases

tracheotomy was performed. In all the cases there was a return of the exudation even after it had been removed once.

3. Are the disturbances of the general health prevented or lessened under the use of benzoate of soda? Letzerich considered a fall of temperature always an evidence of improvement in the general condition of the patient, but Gröndinger mentions, very justly, that in mild cases there is usually a fall of temperature after twenty-four or thirty-six hours, even if no treatment be used, and it very frequently occurs in more severe cases if quinine be employed. He claims further, with equal justice, that the fall of temperature is only a favorable prognostic indication, when there is a corresponding diminution in the intensity of the other symptoms; and he mentions two cases in which death occurred very speedily, in spite of a total absence of fever, in one case, and a very slight grade of it in the other. A rise of temperature is a serious omen, however, after tracheotomy, for it shows that the exudation has extended to the bronchial tubes. Apart from its influence on the fever, the benzoate of soda seemed to exert no influence on the general disturbances so common in diphtheria. Even when given early, these disturbances were not lessened or prevented in the least.

4. No direct evil result has ever followed the use of the benzoate of soda. In one case, eight grammes were taken daily for fourteen days without any evil results. Since it has been shown that the medicine exerts no specific action on the course of the disease, the question may be asked, how does it compare with other agents which have been used in this affection? As a result of extensive experience, ice, chlorate of potash and diffusible stimulants are now chiefly relied upon at St. Anno Hospital; but Dr. Gröndinger thinks that the benzoate of soda may be useful as an addition to the other agents.

A New Mode of Distinguishing Central from Peripheral Paralysis of the Face.—A very singular fact was brought to the notice of the Société de Biologie, at a recent meeting, by Dr. Strauss, which enables a physician to distinguish paralysis of the face, which is due to some central disease, from that form which is due to disease in the course of the facial nerve. It is well known that this diagnosis can be readily made as a general thing by the constant current; the muscles in the paralyzed region contracting if the disease be central, and failing to respond if the nerve trunk itself be involved.

Dr. Strauss says that the diagnosis can be made just as readily by the use of *jaborandi*. If the disease be central,

sweating occurs on *both* sides of the face, but if the nerve trunk be diseased, there is no sweating on the paralyzed side. He says this action is just as pathognomonic as that of electricity.

That the secretion of sweat is under the control of the nervous system, has now been positively established, and this observation of Strauss seems to show, as was to be expected, that the nerves governing the secretion of sweat in the face accompany the seventh pair.

Treatment of Pleurisy in Children by Pilocarpin.—A paper on this subject, by Dr. Vigier, has recently appeared in the *Revue Therapeutique Médico Chirurgicale*. The treatment which he describes has been tried, it is asserted, with very decided success by Bouchut; indeed, he claims to have cut short the disease in its commencement in a number of instances.

The first thing which is advised is to relieve the pain in the side, for which purpose injections of morphia and wet cups are recommended.

In order to prevent, as far as possible, the collecting of fluid in the pleural cavity, a large dose of some emetic is recommended. If this prove ineffectual, digitalis, squills, and the acetate and nitrate of potash are used.

Diaphoretics are also to be employed, and jaborandi he considers the best of these. The infusion may be given in the daily dose of from one to three grammes. If the children refuse to take this on account of its disagreeable taste, the nitrate of pilocarpin may be given by hypodermic injection, in the dose of about one-seventh of a grain morning and night. This produces a prompt and abundant flow of both perspiration and saliva.

Dr. Bouchut considers this a most efficacious plan of treatment. He condemns the use of blisters in the early stages of the disease, stating that they increase the congestion of the pleura. In the later stages of the disease, he considers them useful to increase the activity of absorption when the means previously mentioned have been found insufficient.

Partial Removal of Naso-Pharyngeal Polypi.—At a recent meeting of the Société de Chirurgie, M. Verneuil made some remarks on this subject, which elicited some discussion (*Le Practicien*, November 17th, 1879.) M. Verneuil stated that he had formerly thought that an operation was useless unless the whole polypus was removed, but he now presented a patient to the Société on whom a partial removal had been practised with most satisfactory results. The boy, who was

very well grown, was brought to him in a state of extreme anæmia, caused by loss of blood from a naso pharyngeal polypus. As the patient was in no condition for a very severe operation, M. Verneuil contented himself with dividing the soft palate, and then removing five centimetres of the tumor with the *écraseur*. The polypus was so hard that he feared the chain would break. After this time, the patient did not lose a drop of blood, and regained his health completely.

The subsequent treatment consisted in the employment of interstitial injections of chromic acid, made every two days, which reduced the size of the tumor to such an extent that it no longer caused any trouble in respiration and deglutition.

M. Duplay thought that a certain number of cases of this kind could be treated satisfactorily with caustics without any previous operation.

M. Trélat stated that he had for a long time advocated the treatment of these tumors by division of the soft palate, and subsequent cauterizations, and he had seen two cases in which a complete cure had been obtained—the length of time which had elapsed since the operation being seven years in one case, and four years in the other.

Dangerous Results of the Administration of Chlorate of Potash in Large Doses.—Although the possibility of alarming, and even fatal results from the administration of chlorate of potash in large doses is mentioned in most of the text books on materia medica, it does not seem to be generally appreciated by physicians. In *Le Practicien*, for November 17th, the statement of Dr. Jacobi is quoted to the effect that this drug may cause a chronic nephritis, and he thinks that the increased number of cases of this disease is due in part to the indiscriminate use of the salt.

According to Dr. Schultze, it may also cause a gastro-enteritis of fatal form.

[In the case of Dr. Fountain, who took an ounce to prove its harmlessness, death occurred from gastro-enteritis and nephritis combined.—W. C. D.]

From Spanish and French. By CHAS. R. CULLEN, M. D. (P. O. Richmond, Va.), Henrico Co., Va.

Mortality in Buenos Aires—(From *Revista Buenos Aires*, No. 23, 1878.—Population, 234,029; marriages, 1,478; baptisms, 8,993; deaths, 5,536; deaths from phthisis, 756; pneumonia, 351; infantile tetanus, 364; meningitis, 327; heart diseases,

287; diphtheria, 222; typhoid fever, 114. Of the whole number of deaths, 3,259 were males, 2,227 females.

Hydrate of Chloral in Diphtheria.—Rokitansky experimented with different substances locally applied to diphtheritic deposits, and gives preference to hydrate of chloral in a fifty per cent. solution. Immediately after its application, the pain subsides, and the deposits peel off, with healthy granulations succeeding. (*Ibid*, No. 24.)

Fever Treated by Iodine.—Dr. Anderson, an Englishman, originated the treatment of fever by iodine. Dose five to fifteen drops in a cup of water three times a day after each meal. To make the iodine dissolve well in water, add a little iodide of potassium. This treatment has resulted well in several severe cases. (*Ibid*, No. 24.)

Mortality of Different Occupations.—Dr. Saffray, in his book on the "*Means of Attaining Long Life*," June 23d, 1879, gives the results of his investigations, which are somewhat different from insurance reports. The expectant ages are as follows:

Clergymen, 65 years.....	Deaths 42
Farmers, 61 "	" 40
Merchants, 72 "	" 32
Military, 59 "	" 32
Lawyers, 58 "	" 29
Doctors, 56 "	" 24
Artists, 57 "	" 28
Professors, 56 "	" 27

"In the first fifty years of this century, nearly all these parties reached the age of seventy years."

[*Note by Translator.*—The above is given literally, but the general average of persons of these different callings is much longer than reported in the extract.]

Treatment of Hydrophobia by Curara.—A boy, twelve years of age, was bitten by a mad-dog. After a long incubation, hydrophobia was developed. After using chloroform, injections of curara were used in seven doses of seven grains as the total amount in five hours and a half. With the first dose, muscular motion ceased; and with it, also the dread of water, and all spasmodic twitchings; and, finally, complete calmness for forty-eight hours. When symptoms of the disease again returned, curara, in one-third of the dose, was continued until health was re-established. There was some local inflammation around the points injected. *Giornale de Venice*.

Infusion of Strong Coffee in Metro-Neuralgia.—A large number of so-called remedies have been proposed; but all are

more or less uncertain. Dr. Beynes has proposed a remedy always on hand. When an outdoor patient presents himself, he prescribes six cupfuls of coffee to be drunk during the day, and to report. One case reported herself cured after drinking three cups of coffee. Another case, of twenty-six years of age, regular at nineteen, reported great hæmorrhage every eight days, and sometimes fifteen days. At first the recumbent position was necessary, and she took five cups of coffee the first day; the second day four; and as she improved the quantity was lessened. [How does coffee act in such cases? *Translator.*]

Gastrotomy.—By Dr. Rean (from *Revista de Medicina*, Madrid). This illustrious Professor of San Luis Hospital, doubtless has performed more operations of this kind than any surgeon in France; and his statistics indicate the danger and mortality of the operations:

One hundred and eighty-one cases ovariectomy (single), deaths 44; four cases ovariectomy (double), deaths 2; seventeen twisting of broad ligament, deaths 13; eleven mesenteric tumors, deaths 7; twenty-four interstitial tumors of uterus, deaths 8; fifteen uterine tumors of different kinds, deaths 5; two splenotomy, deaths none; seventeen cancers, deaths 15. In three hundred operations, there were two hundred and six cures and ninety-four deaths.

[Here we would recommend as an interesting book a clinical history of his cases operated upon.—*Translator.*]

Treatment of Syphilis by Subcutaneous Injections of Mercury. Of one hundred and eighty-five persons with syphilis, eighty-five had not been treated with mercury, and were cured in thirty-one days; and of one hundred treated with mercury, the cure was effected in about the same time. Salivation appeared in about fifteen per cent. of the cases. One person died at the tenth injection from yellow atrophy of the liver, and his liver indicated the presence of mercury by analysis.

Health from Skating.—Dr. Cazenave de la Roche says, it can be positively affirmed that skating produces in the human organism an action essentially tonic. Although similar to gymnastic exercises, it differs in the complex character of the actions of the muscles. To explain, all physiologists divide human movements into active and passive. To the first belong walking, leaping, running, swimming, dancing, etc.; to the latter, passive motion of riding in a carriage, in a boat, etc. In fine, skating benefits many kinds of diseases, promoting all the secretions, producing appetite, and toning up all the members of the body.

Treatment of Balanitis by Alcoholic Solution of Tannic Acid.—

Dr. Vipecos publishes his treatment of this disease. First, he washes the glans with a weak solution of salt water; and after dressing the parts, he applies tannin, dissolved in alcohol, equal parts. After the parts are dried, cold water is freely applied. By the fourth day, with this treatment, the inflammation has disappeared.

Treatment of Yellow Fever.—Dr. Pedro Espina, in the treatment of this fever says, the first thing to be done is to give an emetic of tartar emetic, in broken doses, until vomiting begins. After this, the three principal medicines are chlorate of potash, quinine and aconite. To promote alvine evacuations, rhubarb is as good as anything. The local symptoms, such as headache, should be treated by revulsives, and locally by cold applications to the head; and if inflammation continues, treat it on general principles—meeting each local symptom with some palliative—if possible. After the fever is broken, and while the appetite is bad, give vegetable tonics, such as quassia, etc.

Carbolic Acid in Malarial Fevers.—(From the *Medical Gazette* of Cataluna.) Dr. Masoti gives his experience in the use of this agent. The first patient had suffered with intermittent fever for ten months, and was treated by a quack with all kinds of bitters and by bleeding. Then quinine was freely taken, with an infusion of tobacco, without success. Carbolic acid, one-tenth of a grain, was then given, and in three days, the fever commenced lessening in intensity, and at the ninth day disappeared. The carbolic acid was mixed with strong coffee, made very sweet. The next case of intermittent fever had been of five months standing, and was similarly treated successfully.

Puerperal Septicæmia.—Dr. Guérin, of the Academy of Paris, stated that the discussions on the subject from 1858 to 1868, considered the uterus, after the expulsion of the placenta, as an open wound, subject to the absorption of the discharges, such as fluid blood, coagulated blood, lochiæ, etc., which, being retained in the cavity of the puerperal uterus, easily set up putrefaction. Being reabsorbed by the open vessels, fever originates at once. After the expulsion of the child, the first to be done is to cause the contraction of the womb by ergot; secondly, remove the discharges; and thirdly, use antiseptic injections. These are the views of the faculty in Italy, Belgium and Germany; and Dr. Campbell adds, that since adopting this plan, he has not had a single case of puerperal septicæmia. This poison, once introduced into the

wards of a hospital, attacks far and near. Dr. Henrioux himself has informed me that he suffered from the effects of the same poison.

Treatment of Ulcers of the Neck of the Uterus by Creasote and Glycerine.

R. Glycerine.....25 parts.
 Alcohol.....12½ parts.
 Creasote (pure).....1 part.—M.

S.: Touch the ulcers twice a day with this solution.

In twenty-eight cases of simple ulcers, twenty-six recovered in a week. In seven severer cases, all recovered in a little longer time. In two cancerous ulcers, no good resulted after forty days' treatment. The cases were then treated by iodoform. These results justify the belief, that in simple ulcers—not specific—great good is obtained by the astringent and antiseptic properties of this wash or lotion.

Book Notices, &c.

A Manual of Midwifery for Midwives and Medical Students.

By FANCOURT BARNES, M. D., M. R. C. P., Physician to the General Lying-in Hospital, and to the British Lying-in Hospital, etc. With Illustrations. Philadelphia: Henry C. Lea, 1879. 12mo. Pp. 201. (For sale by Messrs. West, Johnston & Co., Richmond.)

The *special* object of this “manual” differs from that of most books on midwifery; its design is to “set forth in plain language so much of the principles and practice of midwifery as it is essential for the midwife to know;” but it will *especially* “be found useful to those medical students who are attending their first cases of labor, and who, therefore, do not require the discussion of any of the obstetric operations.” The book is, in reality, an excellent compendium of midwifery, and as such is useful to practitioners and students; but however much to be desired, it is scarcely to be reasonably expected as an accomplishment, that “midwives,” as generally found in our smaller town and country homes, will reach, during the present generation or the next, the degree of proficiency which an understanding of this “manual” would bring. In by far the vast majority of cases—in fact it is seldom to find it otherwise in this country—midwives are but nurses and are generally illiterate. A much more elementary book would have been more useful for them. A casual review of the “Examination Questions” appended to

the book, "which have been set for the diploma [of midwifery] of the Obstetrical Society of London," shows that many of them are such as would stump even an accomplished and skilled obstetrician. Unless the midwife is to take the place of the doctor, the standard of graduation as a midwife, as set forth in this book is, in the main, too high.

Lecture Notes on Chemical Physiology and Pathology. By VICTOR C. VAUGHAN, M. D., Ph. D., Lecturer on Medical Chemistry, University of Michigan, etc. Second Edition, Revised and Enlarged. Ann Arbor. 1879. 8vo. Pp. 315. (By mail.)

This is an important book to every scientific student of medicine—whether he be an attendant upon a college course of lectures, or a practitioner. It is a work for consultation—not a text-book, for it makes no pretension to completeness. All of the tissues, functions and secretions of the body are studied in their chemical relations to physiology and pathology. To indicate the scope of this work, we have the space simply to append the subjects of the various chapters, viz.: Digestion, analyses of saliva, gastric juice, bile, pancreatic juice, intestinal juice, feces, blood, epithelial tissue, elastic and connective tissue, cartilage, osseous tissue, teeth, fat, muscular tissue, nervous tissue; and the rest of the book, beginning on page 151, is devoted to a consideration of urine. This latter section is especially useful to the practitioner.

Text-Book of Physiology. By M. FOSTER, M. D., M. A., F. R. S., Prælector in Physiology, and Fellow of Trinity College, Cambridge. With Illustrations. Third Edition, Revised. London [and New York]: Macmillan & Co. 1879. 8vo. Pp. 720. Cloth, \$3.50; Sheep, \$4.50. (From New York Publishers.)

This handsome volume, we are informed by the publishers, is issued in advance of a cheap "Students' edition," which is now about ready. But this larger volume, as shown by above statement of prices, is so cheap, and the excellences of the unabridged edition are so evident, that our advice to every one in need of a text-book on Physiology, is to get the one now under notice. The very latest discoveries and approved physiological deductions are here definitely stated. And in the scope of subjects considered, it is comprehensive enough for every ordinary purpose. Without having space to attempt even a statement of the contents, we will add that this is the text-book in Physiology that most nearly conforms to our ideal of what such a book should be.

Analysis of the Urine, with Special Reference to the Diseases of the Genito-Urinary Organs. By K. B. HOFFMAN, Professor in the University of Gratz, and R. ULZMANN, Docent in the University of Vienna. Translated by T. BARTON BRUNE, A. M., M. D., Resident Physician Maryland University Hospital, and H. HOLBROOK CURTIS, Ph. B. New York: D. Appleton & Co. 1879. 8vo. Pp. 269. (Per Messrs. West, Johnston & Co., Richmond.)

In the last number of the *Medical Monthly*, we noticed the translation of this treatise by Prof. Forchheimer, and our notice is not a particularly favorable one. The present version is greatly better. Most of the faults noted by us in that—which were faults of the translator—have been avoided in this, so that if it is even yet not all we wish, it is, nevertheless, considerably more than we had before. We say of this, as of the former work, that there is much useful information contained in it; and we also say of this, as of the other, that the descriptions of the methods for estimating the constituents of urine are not sufficiently explicit. This is, however, the fault of the original work. A treatise professing to teach the art of analysis of urine should be complete in itself, and not refer the learner, as this treatise does, to another work for instructions in manipulation and the preparation of indispensable re-agents—especially not to a work in a foreign language. If the translators will remedy this defect, they will remove the only important objection we have to urge against this book.

W. H. T.

First Step in Chemical Principles; An Introduction to Modern Chemistry, Intended Especially for Beginners. By HENRY LEFFMANN, M. D., Lecturer on Toxicology in the Summer School of Jefferson Medical College, etc. Edward Stern & Co., Philadelphia. 1879. Pp. 52. Price, 50 cents. (From Publishers.)

Students of chemistry in every time and clime have deemed, and justly, too, the topics herein treated to be most intricate and vexing to the soul. The older systems bore very hard upon them, but under the complex exactions of the later ideas their tribulations have become almost unbearable. We are pleased, therefore, to be able to commend to them this little book, in which they will find, we think, much comfort and consolation. Dr. Leffmann gives a very plain exposition of many of the difficult points in chemical theory, notation and nomenclature. He confines himself, for the most part, to unearthing the mysteries of inorganic chemistry, but it would be a praiseworthy act if he would also bring to light the fearful deeds wrought in this our day in the name of notation and nomenclature upon organic bodies.

W. H. T.

PAMPHILETS, REPRINTS, ETC., RECEIVED, for which we have no room for further notice; but most of which can be obtained by enclosing a letter stamp for each pamphlet to the respective authors named.

Further Testimony in Favor of the Use of Large Probes in the Treatment of Strictures of the Nasal Duct. By SAMUEL THEOBALD, M. D., Surgeon to the Baltimore [Md.] Charity Eye and Ear Dispensary, etc. (Reprint from *Archives of Ophthalmology and Otology*. Vol. VI, Nos. 3 and 4, 1878.) Pp. 8.

Operation for Closure of Cleft of the Hard and Soft Palate. By A. VANDERVEER, M. D., Professor of the Principles and Practice of Surgery, Albany [N. Y.] Medical College, etc. (*Series of American Clinical Lectures*, Edited by E. C. SEGUIN, Vol. III, No. 9, 1878. Pp. 15.

Emotional Prodigality. By FAYETTE TAYLOR, M. D. (Reprint from *Dental Cosmos*, July, 1879. Pp. 16.

A Few Well Established Facts in Connection with Squint. By JULIAN J. CHISOLM, M. D., Professor of Eye and Ear Surgery, University of Maryland, etc. (Reprint from *Trans. Med. and Chirurg. Faculty of Maryland*, 1879.) Pp. 15.

Yellow Fever. By THOS. B. EVANS, A. M., M. D., Baltimore, Md. (Reprint from *ditto*.) Pp. 13.

Observations on the Mechanical Treatment of Disease of the Hip-Joint. By CHAS. FAYETTE TAYLOR, M. D. (From *Boston Med. and Surg. Jour.* March 6, 1879) Pp. 8.

Obstetric Forceps and Indications for its Use. By T. G. COMSTOCK, M. D., One of Attending Physicians Good Samaritan Hospital, St. Louis, Mo. (From *St. Louis Clinical Record*, Nov., 1878.) Pp. 4.

Statistics of Placenta Prævia Collected from the Practice of Physicians in the State of Indiana. By ENOCH W. KING, M. D., Galena, Ind. Pp. 50. [This is a most valuable compilation on the subject. This report will be followed by another collection from the practitioners of Indiana at the approaching session of the Society of that State.]

New Operation for Entropion and Trichiasis. By F. C. HOTZ, M. D., Ophthalmic Surgeon to Illinois Charitable Eye and Ear Infirmary, etc. (From *Archives of Ophthalmology*, Vol. VIII, No. 2.) Pp. 15.

Connection of the Hepatic Functions with Uterine Hyperæmias, Fluxions, Congestions and Inflammations. With Appendix. By L. F. WARNER, M. D., Boston, Mass., Vice President of the Gynæcological Society of Boston, etc. (Reprint from *Transactions of American Medical Association*, 1878.) Pp. 37.

Therapeutic Value of Ergot. By J. W. COMPTON, M. D., Professor of Materia Medica and Therapeutics in Medical College of Evansville, Ind., etc. (Reprint from *Detroit Lancet*, March, 1879.) Pp. 8.

Editorial.

The Transactions of the Medical Society of Virginia for 1879, published in connection with this number of the *Medical Monthly*, constitute a most valuable contribution to medical literature. There is not an indifferent paper in the publication. Although it does not contain as many pages as some of the editions of the *Transactions* already issued by the Virginia Society, we may say, without in any sense reflecting upon the merits of the papers in the *Transactions* of former years, that the volume for 1879 is the most important of any one of them. The paper by Dr. H. P. C. Wilson, of Baltimore, in regard to his improvements of Paquelin's Cautery, which makes the instrument, in its perfected state, simply *essential* to every surgeon and gynæcologist, is of inestimable value. Dr. J. Marion Sims' remarks on Hepatic Abscess, based upon his observations of the method of the true diagnosis and treatment of the case of the illustrious editor of the *Richmond and Louisville Medical Journal*, Dr. E. S. Gaillard, by Dr. Wm. A. Hammond, give prominence to a most important fact of recent development—a prominence, indeed, which none less than the great Sims could give to the subject. Dr. J. M. Toner, of Washington, D. C., another of the Ex-Presidents of the American Medical Association who honored the Medical Society of Virginia by his attendance, contributed a Sketch of the Life and Character of Dr. Craik. The material he has here collected is of much importance to the medical history of the State of Virginia; and for this paper, which it was not in the power of any practitioner in Virginia to prepare, we shall ever feel most grateful.

For some years, as an editor, having been in the habit of examining many reports on advances in different departments of medicine as published in Society Transactions, it gives us special pleasure to say that we have not seen in any of the other Society publications such reports of more interest. And as for the *volunteer papers*, they compare most favorably with those of any Society's Transactions that we have ever seen.

But all the papers (except that of Dr. Hunter McGuire) from each contributor at the recent session of the Society are published in the present issue of the *Transactions* (which form a part of this issue of the *Monthly*) or else, by choice of the authors, in the journal part of this January issue. We cannot indulge in a review of these papers, nor should we, when this journal is the medium of publication. We can only commend the papers read at the recent session of the Society to the thoughtful consideration of all parties interested in the progress of medical science.

The delay in the issue of the *Transactions* has been greatly due to the fact that authors to whom proof sheets were sent have not promptly returned their papers.

Body-Snatching in Richmond has been the subject, for the past few weeks, of much ventilation through the daily papers of this city and other places. Exaggerated reports have been given, and descriptions of the methods adopted by "resurrectionists" generally throughout the world have been presented in such form as to shock the unreflecting members of society, and in some manner to alarm the community. To say the least of these reports, as given in our dailies, they are simply sensational in character and extremely impolitic.

The acts of incorporation of the two medical colleges in Virginia—the Medical College of Virginia and the University of Virginia—which are, in reality, *State* institutions and under *State control*—provide that there shall be in each a practical anatomical course, of instruction and graduation. Anatomical and dissecting rooms have been built and fitted up at State expense and under State law. But, unfortunately, there is no "dissection act" as yet adopted by the State. Yet it will be seen that, from the part already taken by the State in affording every facility for dissection, by appointments of Professors and Demonstrators of Anatomy, and in the building and equipment of anatomical and dissection rooms, if dissections of human bodies are in reality made in these institutions, and if these dissections in themselves constitute an offense at law, then the State itself becomes *particeps criminis*. It is ridiculous, therefore, to discuss the subject, and impolitic to ventilate the facts in a sensational manner until some change occurs in the statutes. The result of such discussions cannot be otherwise than injurious to the successful management of the colleges named.

While we are not witnesses to anything that has transpired in the "resurrectionists'" line of duty, still it may be safely

affirmed, we think, that the newspapers' "exposures," so-called, have been greatly exaggerated. In regard to the subjects selected for resurrection, so far as we have any occasion to believe, the utmost circumspection has been used in selecting those bodies whose dissection cannot give grief to the living. Rarely is it the case—we have heard of no instance, indeed—that the subject resurrected has any known friend to care for him or her, or to take any personal concern in the remains.

But we will not say more; we wish simply to inform the gentlemen of the profession throughout the country that no brutality has been practised that is known to the profession of Richmond; and that the sensational rumors afloat have most probably been circulated for political purposes.

Butler's Physicians' Daily Pocket Record, containing a visiting list, many useful memoranda, tables, etc. (fourteenth edition), is just issued, and is a great improvement upon former editions, in that this edition is thoroughly revised, with metric posological tables, etc. A great excellence this "Record" possesses over others is the patent clasp which closes the book automatically, as it were—thus preventing the dropping out of papers, etc. It is edited by Dr. D. G. Brinton, the excellent editor of the *Medical and Surgical Reporter*, of Philadelphia, and is for sale by all book dealers.

The Chicago (Ill.) Medical Gazette, published on the 5th and 20th of each month, commencing January, 1880, and containing twenty-four double-column, large octavo pages in each number, has all the appearances, in style and matter, of an excellent wide-awake bi-weekly. It is edited by Dr. E. C. Dudley, 70 Monroe street, Chicago, Ill. Price, \$2.

Surgeon-General of the United States Navy.—Dr. Phillip S. Wales, who was appointed by President Hayes last August to this honored position, with the relative rank of Commodore, was born in Annapolis, Md., in 1834. He is a graduate in medicine of both the University of Maryland and the University of Pennsylvania, and has practised in Baltimore, Philadelphia and Washington. Until his appointment as Surgeon-General, he was Professor of Anatomy in the Medical Department of the University of Georgetown, D. C.

The Medical News and Abstract is a new 64-page monthly journal, commencing January, 1880, to be issued by Mr.

Henry C. Lea, of Philadelphia. The *Medical News and Library* and the *Monthly Abstract* will be discontinued. Price of the *News and Abstract*, \$2.50 per annum. This new journal will be furnished in commutation, *without charge*, to advance paying subscribers of the *American Journal of Medical Sciences*, the subscription to which will remain \$5 per annum.

The Recent Session of the International Medical Congress, in Amsterdam, is said to have been a great success, and the foreign journals are coming in loaded with full reports. Drs. Lewis A. Sayre and E. C. Seguin, of New York, and Turnbull, of Philadelphia, were the most prominent Americans in attendance. Dr. Sayre satisfactorily demonstrated his plaster-jacket treatment of spondylitis on two patients. Dr. Sayre also invited a large number of the more distinguished attendants to a dining which was heartily enjoyed. The next Congress will be held in England. Prof. Lister made himself glorious in regard to his antiseptic treatment, and has evidently broken down opposition to "Listerism" wherever such opposition existed.

Medical Advance.—Dr. C. Henri Leonard has retired from the editorship of this very useful journal, and A. B. Lyon, A. M., M. D., Professor of Chemistry and Toxicology in Detroit Medical College, assumes it. New features will be introduced, and abundant illustrations employed.

Gaillard's Medical Journal is the new name of what was known as the *Richmond and Louisville Medical Journal*. Dr. Gaillard, on account of health, has been compelled to leave Louisville; and has selected New York as his future residence, where he will continue to publish (under its present title) the medical journal which, from the excellence of its management in days gone by, has given the editor a national reputation. We are glad to hear that Dr. Gaillard's health has been perfectly regained; and the care and ability with which each line of the December number, 1879, of his journal is edited, indicates that he will succeed in his new home. May prosperity attend his efforts.

The St. Louis Medical and Surgical Journal, under its energetic and able editor and proprietor, Dr. Thos. F. Rumhold, will make another improvement, commencing January, 1880, by issuing twice a month—on the 5th and 20th of each month. We most cordially congratulate this great

medical editorial leader in the success he has achieved, and in the good he is doing the profession. This journal publishes the *Transactions of the Tri-States Medical Society as an addition* to the journal proper. Three dollars a year.

Messrs. John C. Baker & Co's Advertisement of Extract of Malt, etc., which was in the December number, 1879, on the page of "Contents," should have appeared on the lower half of the first inside cover page. In thus correcting an oversight of the compositor, we are glad of the opportunity afforded of calling special attention to the advertisement of one of the oldest and most reliable business houses in America.

The University of Michigan (Medical Department) announces that, commencing October, 1880, the course of instruction will comprise three collegiate years of nine months each. Examination for admission will also be required.

The Physician's Visiting List of Messrs. Lindsay & Blakiston, for 1880, is now ready. This is a decided improvement upon former editions, containing a list of remedies and doses, a revised table of poisons and antidotes, Prof. Oldberg's table of metric weights and measures, etc. The friends of the former editions, who are now numerous throughout the country, will be greatly gratified by this further effort of the publishers to improve this *twenty-ninth* annual issue.

Dr. A. M. Fauntleroy, of Staunton, Va., has been recently elected Superintendent of the Western (Va.) Lunatic Asylum, at Staunton. Dr. Fauntleroy is well and favorably known to the profession of Virginia and other States—having been the contributor of many valuable articles to medical literature. He was, until his election to the Superintendency of this Asylum, the Physician to the Blind, Deaf and Dumb Institution at Staunton. In 1871, he was elected President of the Medical Society of Virginia, and has since been elected an Honorary Fellow of that body. Without reflecting in any particular upon the merits of other applicants for the position—some of whom were men of eminence in the profession of this State—it may be added that no better available selection could have been made, and that the election meets with the cordial approval of the profession and citizens of Virginia.

Galveston Medical Journal is a new monthly, of thirty-two pages, to be begun in Galveston, Texas, on January 1, 1880.

Price \$3 a year. The eminent surgeon of Texas, Dr. Greenville Dowell, is editor and publisher. Professors T. J. Heard and J. F. Y. Paine are co-editors. We most heartily commend this enterprize, from our knowledge of the ability and energy of the editors.

Queries and Answers.

Questions Regarding Diphtheria.—Dr. T. J. W. Peay, President of the New Hampshire Medical Society, Dover, N. H., requests answers to the following questions:

- 1st. Does this disease prevail to any extent in your State?
 - 2d. In what kinds of soil and conditions of life is it seen? In your observation and experience, what are the causes of this disease? Name cases or epidemics, where there can be no doubt as to their origin or cause.
 - 3d. Are there any atmospheric changes which favor or modify its existence?
 - 4th. What, in your judgment, is its nature? Has it any relation to membranous croup? Difference, if any?
 - 5th. Contagious or infectious?
 - 6th. Percentage of mortality in your State, or in your practice?
 - 7th. State briefly the most successful treatment.
- If you have written upon this disease, please forward your article.

Paper on Typho-Malarial Fever Wanted.—Dr. R. Fowler, of Elmo, Texas, wishes some competent physician, who has considerable experience with the disease, to furnish this journal with an article on "Typho-Malarial Fever as we have it in the South." The disease has been prevalent and very fatal in his county for the past three years.

Obituary Record.

Dr. Freeman J. Bumstead, the world-famed syphilologist, died at his home, in New York city, on November 28th, 1879. He was born in Boston, April 21, 1826. He had just finished superintending the publication of his great work on *Venerreal Diseases*, which we noticed in the December No., 1879, of the *Monthly*.

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Original Communications.

ART. I.—On Dr. Salisbury's Method of Treating Phthisis. By REGINALD E. THOMPSON, M. D., F. R. C. P., Senior Assistant to the Hospital for Consumption at Brompton, etc., England.

Having read the *resumé* of Dr. Salisbury's new plan of treating phthisis (in the October number, 1879, of the *Virginia Medical Monthly*), I would venture to add my plea that instead of theoretical opinions being brought forward to demolish the new system, which has absorbed Dr. Salisbury's attention for a long period of years—a method of humbling true and good work which is very freely adopted by arm-chair professors and scientists who have not the wit to construct theories—the proposed plan of treatment should be fairly and fully tested by clinical experiment. The remarks of the Editor, in the November number of the *Monthly*, are deserving of all consideration. Theories, opinions, facts, should be carefully examined and weighed; but it is absurd—nay, more than that—it is dishonest to start to controvert an opinion before the facts upon which it is based are placed completely before the world, and before actual experiment has been made regarding the truth of the facts recorded. Whatever be the value of the suggested mode of treatment, that cannot be gauged by the imagination; and it is well to remember in this, as in all kindred instances, how satisfactory it was proved by the professors and scientific men of the day

that Harvey's discovery was entirely false—his adversaries not being humble-minded enough to learn what Harvey had to teach, nor to be shown those things which they could not see without his aid.

From the short paper which Dr. Salisbury has issued as an *avant garde* to his larger work, it is evident that he considers phthisis to be the result of a distinctive agency, foreign to the body, and introduced from without by certain ingesta; and, *prima facie*, nothing is therein put forward which is impossible, nor even improbable.

The theory involves several ideas, all of which may be true, or the facts on which the theory is built may be correct, and the theory incorrect; and I say this, arguing from a general view of previous theories, and not from any intention to cast the slightest doubt upon facts or theories in the particular instance under consideration.

Experience shows that facts and theories (even although accepted at large by the profession) are not always equally true. Let me illustrate this statement by referring to theories which have been tolerated on very insufficient evidence, by men of science. It has happened to them to strain at gnats while they have swallowed camels.

Some years ago, a theory was started by a learned man in Germany, that phthisis was the consequence of a diseased condition of the upper costal cartilages, and an elaborate treatise was written to this purpose, which has received approval, strange though it may seem, from many authorities in Europe. It has been quoted with some approbation, and at considerable length, in Ziemssen's *Cyclopaedia of Medicine*; it has been noticed also by English lecturers on medicine; while in Russia, it has actually been proposed that all recruits for the army should be specially examined by having their ribs tested, in order to reduce the number of cases of phthisis in the army.

Now, the facts upon which this theory is based, by no means bear out the notion; they have been incorrectly observed. Invariably in phthisis (pure and simple)—especially as it occurs in the young adult—the costal cartilages are so soft that they cut like rubber; the use of the saw is never

necessary, and on the contrary some care is requisite to avoid wounding the lungs beneath with the knife.

The exceptions to this rule (exceptions on which the theory has been built) are these: In some chronic cases with old adhesion of the pleural surfaces, the cartilage of the side chiefly affected may become ossified in consequence (not as a cause) of the disease; and, again, in drunkards who have finally succumbed to phthisis, the alcoholic induration affects the cartilages, and so decided is the rule and its exceptions that it is quite possible to approximate (in a general way) to the peculiar character of the phthisis from the condition of the cartilages.

Now, here we have a remarkable instance of the facts and theory, brought forward by Freund, being both incorrect; and yet, both have, in some measure, been accepted, although the facts can easily be disproved, and the theory is anything but brilliant.

But let us point out an instance in which observations were correct but the theory attached to them was false:

More than a century ago, Richard Morton, who wrote one of the most valuable treatises on phthisis ever given to the world, gave his reasons for believing that phthisis could result from hæmorrhage. The pathological conditions, which he describes minutely and accurately, are perfectly correct; and undoubtedly they are due to previous hæmorrhage. These observations, although they are true, have been set aside by all writers and medical teachers until they were adopted by Niemeyer (who inaccurately attributed them to Hoffmann, they being original to Morton).

The French school of phthsiologists were in complete ignorance of what Morton had seen, and passed to one side the notion that hæmorrhage could lead to phthisis—Andral only excepted.

If Morton had been satisfied simply with recording facts, he would have done extremely well; but unfortunately he resorted to that peculiar operation which is known as evolving out of one's inner consciousness (an elaborate phrase which means that imagination supplants observation); and he produced the theory that blood became putrid and set up an irritation in the lungs.

No proof has been attempted, either by Morton or by Niemeyer and his followers to show that blood undergoes putrefactive changes in the lungs.

Having now examined some hundreds of lungs in all stages of phthisis and hæmorrhage, I can state with some positiveness that in no instance have I been able to detect by any outward visible sign that blood which may have been retained for months in the lungs becomes putrid. Moreover, experiments on animals, which may, in this instance, be used as an argument to the point, disprove the notion. The same thing may be said of the theory propounded by Niemeyer. Pure, unadulterated blood does not produce caseous pneumonia; and moreover, if the nodules described by Morton had been carefully examined by the microscope, it would have been apparent that they were not pneumonic products at all. They are simply blood clots which have been driven into the lung by the inspiratory force (the pressure of the atmosphere), and which have passed through the ordinary stages which blood clots ordinarily undergo, viz.: loss of color and fibrination.

I have adduced these examples to show how capricious the profession is occasionally in dealing with facts and fancies—admitting some which are grossly improbable, rejecting some which are true. *Humanum est errare.*

With regard to Dr. Salisbury's theory, I should like to point out how far (working from an independent point of view) I seem to have travelled along the same road, or, perhaps, it should rather be said, in the same direction, although he has been much longer on what is perhaps the right road, and has far outstripped me. For some time, I have been convinced that phthisis has been approached a great deal too exclusively from the climatic side of the problem; and this notion has taken firm hold because I have seen so many cases (out of a total of twenty-six thousand patients) improve in an extraordinary manner under conditions of air and temperature which would generally be regarded as most unfavorable. To take a homely illustration, no one, I suppose, would conclude that the blight which destroys a pet plant is due simply and entirely to the climate or temperature of the

room in which the plant is kept. The blight may be encouraged by the climate, or the plant may be so weakened by the climate as to succumb to the invasion of the blight; but the agent which is feeding upon the plant is the blight.

Again, the inheritance of phthisis has been considered from what appears to me a totally wrong point of view. The heredity is not the actual disease, but a feebleness or delicacy, if you will, but certainly a peculiarity of structure which facilitates and encourages the development of the disease. On this point, I am not quite in accord with the author of the paper in the October number of the *Monthly* (pp. 531), inasmuch as I believe that the inheritance of structural peculiarities favors the invasion of phthisis.

Let me call to my aid the analogy of syphilis to illustrate this point. A syphilitic father, in whom the disease, as far as may be judged, has not affected the visceral tissues, and who, arguing from a large number of cases, is invulnerable to another attack of syphilis, at the time begets a child who evinces a tendency to structural changes of peculiar kind, and probably suffers soon from marked visceral disease. This child, again to argue from a number of cases, becomes very vulnerable to syphilis. In a similar manner, the phthisical parent engenders offspring who are liable to visceral changes, and extremely vulnerable to phthisis.

My creed with regard to phthisis is this: I use the word with a definite meaning, and in a restricted way, to signify destruction of pulmonary tissue by solution of continuity, to use a phrase adopted by the late Professor Rokitsansky. This destruction of tissue may attack any portion of the pulmonary parenchyma. It is towards this terminus that pulmonary diseases converge; and it is in phthisis that they may terminate. Laennec and his followers, who maintain tubercle to be the *fons et origo mali* (another theory based on inaccuracy, which has been greedily accepted by many), only complicate the matter still further, inasmuch as they do not attempt to explain why tubercle should break down. It is impossible that a growth of tissue should be identical in process to the solution of that tissue; and I can only understand that tubercle should dissolve because it yields to the destruction of some agency.

The process of phthisis appears to me to be one and indivisible; and it attacks all kinds of pulmonary structure incapable either from inherited or acquired peculiarity of structure (deficient vitality, if you will) of resisting the inroads of the destroying agent. Here, however, I am stopped, as I have failed to discover or to arrive at any clue which may tend to the discovery of this particular agent. I look to Dr. Salisbury to lift me out of this slough of despond. Tubercle I look upon as in all cases a secondary formation, due to irritation of tissue resulting from the presence of septic matter. This matter, however produced, may be introduced into the blood vessels, leading to a general condition of disseminated tubercle (acute tuberculosis); or inhaled into the bronchial tubes from a cavity, it may form the lobular tubercle, which is better known under the term of "Carswell's grapes," or it may be taken up by the lymphatics.

I have ventured to put forward these opinions, inasmuch as I feel very strongly that the old theories of phthisis are very imperfect—many of them absolutely wrong—and we require a new theory to enable us to attack the problem from new points. For my own part, I shall hail with eagerness any new vein of thought which may open out a mine of treasure; and from the reputation of Dr. Salisbury, I confidently hope that he will lead us to fresh fields and pastures new.

ART II.—**Malarial Hæmorrhagic Fever.** By W. H. JOHNSTON, M. D., Ex-President Selma Medical Association, etc., Selma, Ala.

This disease is properly classed among the fevers which arise from malarial poisoning. There can be no doubt that it is due to malaria, as the disease does not occur in non-malarious districts, unless the individual in whom it occurs has recently been exposed to malaria in regions where this disease prevails.

It most commonly occurs in vicinities lying near swamps, or low grounds, where there is stagnant water with undergrowth and decaying timbers; and also on those plantations where ditches have been neglected, and the land is no longer

properly drained. I have been informed that it was rarely, if ever, seen before the war in places where it is now frequently seen. And, on a thorough investigation of these places, they are usually found to be far more imperfectly drained than before the war. The ditches on these plantations will generally be found to be filled up, here and there, so as to prevent them from carrying off the water, and in consequence, the land is overflowed in wet seasons. These ditches, before the war, were kept in perfect order, and the land was more thoroughly drained in consequence.

Malarial hæmorrhagic fever attacks men much more frequently than it does women. The only reason I can assign for this is, that men are more exposed to the poisonous atmosphere. They are more frequently exposed at night, and before day; and it is well known that miasmatic poison is more active at night. Men, in their daily avocations, are much more frequently required to visit those places where the atmosphere is loaded with miasmatic poison.

Another interesting fact is, that negroes are rarely ever attacked by this disease. To what fact their very general exemption is due, I cannot satisfactorily explain. I am rather inclined to believe that from their constant exposure to malarial poison, their systems have become, to a certain extent, habituated to the poison; and for this reason they escape those diseases in which the severest manifestations of the poison are seen. Yet they are liable, and, in fact, in some seasons, quite frequently have the milder forms of malarial fevers. This explanation is by no means satisfactory, because there are negroes who have been brought up outside of these regions; and yet when they go into these infected places, they seem to be also as equally exempt from this disease as those who have lived there. But it is true, at the same time, that they are more liable to the milder forms, than the negroes who have lived in such localities. There must be, in addition to the above explanation, some safeguard which nature has thrown around the negro to account for the rarity of this disease among them. At one time they were thought to be exempt from yellow fever; but in late years they have not escaped from its ravages. Let us hope, that, in the strides

which medical science has made in our own time in preventing disease, the day is near at hand when this disease, too, will be spoken of among the things of the past. The stamping out of it will add another glorious monument to the highest of all medical art, namely, the prevention of disease.

In intermittent fever, the anatomical lesion is found in the spleen; in remittent fever, the lesion is found in the liver. In the disease now under consideration—malarial hæmorrhagic fever—the kidneys are the seat of the most important lesion, and upon these organs the force of the poison appears to be chiefly expended. They are in a state of congestion and engorgement, and rupture of the capillaries takes place. The liver, too, is more or less congested in every case, as is shown by the jaundice, which is never wholly absent when the disease is left to nature. It is highly probable that the gastric disturbance is due, in a majority of the cases, to defective elimination of the urinary ingredients by the kidneys. But in some cases, there can be no doubt of extreme congestion of the stomach; otherwise we would be unable to account for the vomiting of a “coffee-ground” colored material, which takes place in some cases, and is due to a rupture of the small capillaries in the stomach, and the action of the gastric juices on the blood.

The symptoms, in a well marked case, are unmistakable. The patient must have been exposed to the miasmatic poison, and the poison must have been at work in his system. In some instances, there may be a history of repeated chills before the disease makes its appearance. But this is by no means an invariable rule. The patient may go on for weeks imbibing the deadly poison, with no other outward manifestation of the disease than a pallid, brownish discoloration of the skin, when suddenly he will have a chill; this may be followed by a second or third, before the disease makes its appearance. The chill, followed by fever and the renal hæmorrhage, with the jaundice and intense nausea, make the diagnosis easy.

This disease resembles, in its symptoms, yellow fever more closely than any other disease. The pulse even may be unnaturally slow in the beginning of the disease, which is a

rare thing in a fever due to malaria alone. The accompanying fever, in some cases, may be slight, and in such cases I have not, as a rule, taken the temperature of the patient. But I have known the temperature to be 101.5°F. , when I thought the patient was free from fever. In other cases, the temperature has been as high as 106° . The temperature may be more than normal throughout the disease; and in other cases there may be intervals in which it is normal. The intellect is clear as a rule; the tongue slightly furred; the pulse is accelerated almost invariably after twenty-four or thirty-six hours have elapsed; bowels are usually constipated.

In the vast majority of cases, the symptom which is the most distressing of all others is the nausea, with the constant retchings and vomitings. The nausea is not relieved when the stomach has emptied its contents, but still persists. When this nausea and vomiting have continued for hours, the patient not infrequently vomits a blueish-looking material, which I presume is caused by the action of the gastric juices on the bile, although I have never made a chemical examination of the same to ascertain if it contained the biliary ingredients.

The patient soon becomes pale from loss of blood, and presents a waxy-looking appearance. There is generally thirst, due both to loss of blood and the presence of fever. The patient may frequently be perspiring, but it is due to the nausea, and is not that healthy perspiration which precedes the termination of malarial fevers.

After the disease has once seized the patient, there may occur two or three rigors in twenty-four hours. I have seen two in twenty-four hours in several cases. And if the hæmorrhage ceases before the occurrence of these rigors, it will recur after each rigor.

The first time the bladder is emptied after the rigor has occurred, the urine will be found bloody. The urine closely resembles, in appearance, pokeberry juice.

The symptom most alarming to the physician is, suppression of urine; and when this occurs, there is left little hope for the recovery of the patient. He may die from loss of

blood; he may die from uræmic poisoning, brought on by suppression; or he may die from exhaustion, due to long continuance of the disease, and hence to his not being nourished sufficiently to sustain life.

In some cases, there is a partial suppression of urine. The patient will pass only a small quantity in the twenty-four hours—not more than from three to eight ounces; and the nausea in these cases is almost always very distressing.

In speaking of the treatment of this disease, we naturally take up first the nausea and vomiting; because to these symptoms our attention is first called by the patient; and we too plainly and painfully see the distress it causes. I have found no medicine that would give any relief to these symptoms in this disease. But I have never known a hot bath, and an hour's sweat in blankets after the bath, to fail in giving some relief. I give this hot bath, even if the patient is perspiring at the time. The perspiration caused by the nausea does not seem to give any relief. If the nausea recurs, I repeat the bath. I was first induced to use profuse diaphoresis, because I believed the nausea was produced by the kidney trouble, and I knew that the kidneys would be relieved by it, and the nausea also, if due to trouble connected with these organs; and I have yet to see the case which was not benefited by it. The vessel containing the hot water should be large enough to immerse the body of the patient. The water should be as hot as the patient can bear, and hot water must be added, if necessary, while patient is in the bath, to keep up the temperature of the bath. Put a blanket around the patient, enclosing the vessel containing the water. Keep the patient in the bath for fifteen or twenty minutes, until the perspiration comes out freely on his forehead. Give him all the ice he will eat while in the bath, and while wrapped in the blankets in the bed. When removed from the bath, do not dry his body, but wrap him in the blanket that was around him while in the bath, put him in bed and cover with blankets. Keep him in these blankets for an hour at least. The perspiration will pour off of him in big drops; his skin will clear up; the congestion of the kidneys will be relieved; the nausea will cease, and in from four to six hours, the urine will begin to clear up.

After putting the patient in the bed from the bath, I immediately give from three to ten grains of calomel. I give the one dose of calomel because the secretory organs are almost always in a torpid state. In the course of one or two hours, I give thirty grains of quinine by enema, or eight to ten grains hypodermically; and I also give teaspoonful doses every two hours of Squibb's fluid extract of ergot, until I see the hæmorrhage is clearing up. If the patient goes on well, I repeat daily the thirty grains of quinine by enemata for three days. If my patient has no relapse, after the fourth day I then put him on a tonic mixture of iron and quinine, which I order to be continued for two or three weeks.

If the patient has a relapse, I repeat the hot bath, and double the length of time in the blankets in the bed. I have kept them in the blankets for six hours with benefit. The patient, after the first bath, is put thoroughly under the influence of quinine, and kept so four days. If the quinine fails to prevent a return of the rigor, I then, after the second bath and blanketing, put him under the influence of morphine about four hours before the expected rigor, and keep him constantly under its influence for three days, and then gradually withdraw its use. If morphine does not agree with the patient (and in some cases it does not), I substitute chloral, and use it for the same length of time.

There is no doubt that in some cases quinine will fail to keep off the chill, and that, too, when the patient is fully quinized. I have seen patients have severe rigors, with return of the hæmorrhage, nausea and jaundice, when they were deaf from quinine given hypodermically. There could be no doubt about the absorption of the quinine, as the patient complained of the deafness and the roaring in the ears. In every case I have seen, where the urine had cleared up, and the jaundice had about disappeared, if the patient had another chill, it would be almost immediately followed by a return of the hæmorrhage, jaundice, and more or less nausea.

As to the quinine producing the hæmorrhage, which some believe, I still have serious doubts. If a dose of quinine was administered, and no chill and no fever followed it, and yet

the hæmorrhage from the kidneys returned in the course of from two to four hours after the quinine had been taken, it would be strong evidence of the fact to my mind. In one case, I was inclined to believe a six-grain dose of quinine by the mouth caused a repetition of the hæmorrhage in a little patient four years of age. The hæmorrhage recurred about four hours after the quinine had been taken. I saw the patient three hours afterwards, and the temperature was then 101.5° F. The patient had been free from hæmorrhage for two days, and during that time I thought her free from fever, but did not use the thermometer. Ten grains of quinine had been given each day by enemata, with no return of the hæmorrhage. So I am by no means certain that the patient did not have a slight chill while sleeping, although there was no complaint made of feeling chilly on awakening.

When there is partial suppression of urine, I give a diuretic mixture containing acetate of potash, sweet spirits of nitre, and fluid extract of broom-top, every two hours, in addition to the other remedies already mentioned.

When there is entire suppression of urine, the hot bath, cupping over the kidneys and the above diuretic are used; and if no relief follows, I cease to expect any other but an unfavorable issue to the case. If the patient craves acids, I give dilute nitric acid every three or four hours in doses of from ten to fifteen drops, diluted with syrup and water.

The nourishment I principally rely upon is sweet milk, soft boiled eggs if desired, and soups with beef tea. But if they take the milk well, I never insist upon anything else.

In my opinion, there is no disease which more positively requires absolute rest than this one. The patient should not be allowed to move if possible to prevent it. The miasmatic poison has seriously affected the nervous system, and no doubt it is, in the main, when we meet with cases where repeated rigors occur during the twenty-four hours, and in which quinine fails to prevent the rigors. In these cases, morphine or chloral is almost certain to have a happy effect, and prevent a recurrence of the chill or rigor.

I do not believe in the use of turpentine in this disease, because I am afraid that it may produce suppression of urine.

Turpentine is a stimulating diuretic, and the kidneys are already in a state of engorgement, and for that reason I am afraid to use it.

If the patient is too weak to bear the bath, I think there are small chances of his recovery—it matters not what is done. I have seen the pulse fall twenty beats per minute, and become stronger and fuller in from four to six hours after the bath, when before the bath it was frequent, small and weak.

When the blankets are removed from the patient after the bath, and after his having sweated profusely in the bed, his body should be wiped dry under the cover, and the towels used should be first warmed; no *draft* of air should be allowed in the room while this treatment is going on.

If the patient has become exhausted and greatly debilitated from the loss of blood, or any other cause, and the pulse is frequent, small and weak, we must then rely chiefly upon free stimulation. The stimulant may be given by the mouth, rectum or hypodermically. The patient will sometimes rally to brandy, used hypodermically, when no perceptible effect could be detected from its use by the mouth or by enema. I have never used ammonia hypodermically. Brandy, when thus used, gives a good deal of pain at the time, but I have never known an abscess to be formed by its use even in those of the tenderest age.

I am fully persuaded that some of these cases would get well if left to nature alone; but even in those cases the convalescence would be much more tedious. I presume there is no one who doubts that the kidneys are in a state of congestion in this disease; and while in that state, they cannot perform perfectly their physiological function. Believing and knowing this, it is clearly our duty to give the crippled organ all the rest we can, and permit nature, in her own beneficent way, to repair the damage done. We secure rest to the kidneys best by making the skin perform the function of the kidneys to the fullest extent of its capability. And again, when we see that the nausea has been mitigated or relieved by the diaphoresis, we are surely warranted in believing that some poisonous element in the blood has been eliminated by this process, which, if not the only element in keeping up the

nausea, was, at any rate, one of the principal elements in causing it.

Let me insist that the bath and blankets are highly beneficial, even when the patient is perspiring, *if his skin is still yellow, and he is, in the least degree, nauseated.* The perspiration, in the large majority of those cases, is due to the nausea alone, and nature is striving manfully to eliminate the poison. Do not fail to give her your aid and support, because you find her in the right road. We are told that the more closely we copy nature's cures and follow her teachings, the higher in the scale becomes our art. If diaphoresis is tried once and thoroughly in the treatment of this disease, I venture to assert that he who tries it will never treat another case without using it.

I do not pretend to claim that *all* will get well when this plan is adopted and carried out thoroughly; but I do say and believe, that if the patient is seen early in the disease, and this plan is carried out, the death-rate will be very small. I have not kept a record of the cases I have treated, but can recall to mind ten cases that I saw from the beginning; and of that number, one died. I believe now this fatal case could have been saved, but from timidity on my part in using this plan of treatment laid down. I was afraid of exhausting him. It was the first case I had ever seen. His nausea was relieved by the bath, and he expressed himself as feeling decidedly better. When the nausea returned, I was afraid to repeat the bath, and in twenty-four hours suppression occurred, and he died in four days afterwards. Now, I am thoroughly satisfied there is much less danger of suppression occurring when the diaphoretic plan is adopted, as that gives most relief to the kidneys. The kidneys cease to work, because the vessels are engorged beyond their working capacity. The hæmorrhage which ushers in, or, rather, characterizes the disease, gives at first some relief to this engorged state; and then it is our duty to come in, and assist nature in taking this burden off, before it becomes too great to be endured. A good horse that is not overloaded will go through life without even once balking. But let the wagon be loaded so that when he has exerted all his strength it is im-

possible for him to move a wheel, in a short time he will refuse to pull a pound. So, when disease cripples an organ, it is our duty to remove all the load we can from it, and to bring to its aid and support every resource which medical science has placed in our hands.

Nature has wisely decreed that any function which is necessary in order to sustain life, can also be more or less imperfectly performed by other organs of the body, for a time at least. The skin and alimentary canal are the organs destined for the relief of the kidneys. And it is to them we look for aid in this disease.

There is a decided objection to free purgation, as frequent, watery stools rapidly exhaust the patient; therefore, that mode of relief should be discarded. But it is to the skin that we principally look for aid in this trouble. And it is the physician's task to make it, for a time, at least, do the duty of the over-worked and crippled kidneys. During the short rest given to them, nature is busy repairing what has gone amiss, and preparing the crippled organs for a resumption of their duties, which it rarely fails to accomplish when timely assisted.

In conclusion, I can also say, convalescence is very rapid under the above plan of treatment.

ART. III.—**Rupture of the Vagina during Labor and Escape of the Fœtus into the Abdominal Cavity—Delivery through the Rent in the Vagina—Death on the Third Day. Autopsy—Remarks.** By FRANCIS D. CUNNINGHAM, M. D., Professor of Anatomy, Medical College of Virginia; Ex-President Medical Society of Virginia, etc., Richmond, Va.

November 14, 1879. I was called at 6 P. M. to see A. B., a colored woman, aged 26 years. On my arrival, I learned that she had been suffering slight uterine pains since the early morning, when she had been awakened by slight labor pains, followed by rupture of the membranes, and escape of the waters. She was the mother of five children, two of whom are living, and the other three still-borns—two of the latter having been footling presentations. At the time of my visit, the pains were decided in character, and occurred about every ten minutes. On examination, the os was found

dilated to about the size of a silver dollar, and dilatable to such an extent that, without trouble, I diagnosed the presentation of the fœtus to be by the breech—the position, that with sacrum towards the left sacro-iliac junction of the mother; and the sex female. I informed the patient of the prospect of an early labor, and directed her to send at once for the white woman she had engaged to officiate as midwife. She had only sent for me to see if she was “all right,” and because I had formerly promised to come to her assistance should the occasion require it.

After visiting a patient in a distant part of the city, on my way home, about 7½ o'clock at night, I stopped by the house to see what progress had been made, and if the midwife was on hand. The midwife greeted me with the announcement that it was a breech presentation, and by her manner and replies to my questions, satisfied me that she was experienced, and especially aware of the manipulations required for delivery of the head in breech presentation, and, in a word, of the proper management of such a case. Making another examination, I verified my former diagnosis, and found the os still more dilated. The pains had now become so regular and uniform in strength that I encouraged the patient with a promise of speedy delivery, as everything was as it should be, except the breech presentation, which would only require rather harder pains, and was a matter of no consequence so long as she had an attendant who understood the situation, and was prepared to render the necessary assistance. After telling the midwife to send for me, without hesitation, if she thought anything was wrong, I went home about 8¼ P. M.

At 11½ P. M., the husband came for me, saying that the pains had stopped, and that the midwife said something was wrong which required immediate attention. In fifteen minutes, I was at the house, and learned that half an hour before, the pains had suddenly ceased after a bearing-down one, of unusual severity; and with the stoppage of the pains, there was much prostration, and for the first time a considerable flow of blood, which still continued. The midwife had given a teaspoonful of ergot after the pains stopped, but with no effect. The patient had an anxious, prostrated look, with weak pulse, of great rapidity, but said she was in no pain, although very sore over her abdomen.

An examination now revealed that an elbow was presenting, with very unusual surroundings. Bringing down the hand, I satisfied myself that it was the right arm presenting; and then, by careful and systematic investigation, quickly

made, I learned that the child had passed entirely through a rent in the anterior vaginal wall into the abdominal cavity, whilst the placenta was lying partly in the mouth of the womb, and partly in the vagina—the cord passing up through the rent, and pulseless. The womb itself was firmly contracted, and was lying behind the now cross-placed fœtus, uninjured, as far as I could detect.

Realizing the situation, and being satisfied of the large size of the rent, I decided at once to attempt delivery by podalic version, through the wound, and by the vulva. This I was fortunately able to do without any difficulty; so that, in about fifteen minutes after my arrival, and about forty minutes after the rupture, a dead female child, of average size, was extracted; and by 12½ A. M., the patient was made comfortable in bed. I gave instructions to give her ten drops of laudanum and a teaspoonful of whiskey every hour until she slept; and when she was awake, milk and lime water for nourishment, and to allay thirst.

November 15, 7½ A. M. Quite comfortable, and slept some towards morning. Pulse 120 and feeble, but no fever; reaction good. Used the catheter, and drew off nearly a pint of urine of bad quality—rather dark and offensive in odor. Directed to continue the milk and lime water, and lengthen the time between the doses of laudanum, etc., to two hours, if awake.

November 16, 8 A. M. She had passed urine voluntarily and without trouble this morning. Pulse quicker than yesterday; yet she feels quite comfortable, except some soreness when she attempts to move.

Towards evening she suffered pain in the abdomen and the seat of the wound, and also had slight nausea. Ordered warm fomentations and morphia in place of laudanum.

11 P. M. Pulse 145; nauseated; severe pain over abdomen generally, but worse over the seat of the vaginal laceration; countenance anxious, and extremities cool; sinking.

November 17. Died at 7 A. M.—about fifty-five hours after delivery—she having gradually sunk during the night, but retaining her intelligence, and having taken no morphia for five hours before death, as she complained of no pain after the second dose of one-quarter of a grain.

Death was the result of peritonitis.

The husband of the patient, a colored man of more than ordinary intelligence and reading, readily consented to my request for an autopsy; and with the assistance of Drs. John

G. Skelton, M. M. Walker and Thomas Evans, at 1 P. M. on the 17th, we examined the abdominal cavity.

Autopsy.—Abdomen not much distended; womb contracted to the proper size. The abdominal cavity contained a few clots, and about a pint of bloody fluid. The peritoneum was red, and inflamed generally, but especially in the vicinity of the rent. The transverse colon was inflamed, and red on the lower aspect or side towards the seat of injury. The rent in the vagina was triangular in form, three inches across the base, which corresponded with line of attachment of anterior wall to the cervix, and coming down to a point underneath the bladder on the left side of the urethra, and to the posterior aspect of the pubic bones—the margins of this triangular opening being well defined and measuring about five inches long in the undisturbed condition of the parts. Except where the vaginal wall had been roughly torn from its attachment to the anterior aspect of the cervix, and a few fissures around the os, the uterus appeared uninjured by the accident, although the peritoneal investment of the organ was highly inflamed as a result of it. The other viscera of the pelvis were all normal except as to the peritoneal inflammation.

The autopsy revealed the fact that an abscess near the posterior commissure of the vulva, which had been giving trouble, and was opened three months before labor, was in no way responsible for the accident, as the probe passed directly backwards to the rectum, and the abscess was but the beginning of an anal fistula, as had been previously diagnosed.

Remarks.—About ten years prior to the occurrence of the above case, the writer was called to one in which he found the woman *in articulo mortis* from a rupture of the anterior wall of the uterus, extending also into the vagina. The fetus was delivered by podalic version, and without much difficulty; but the mother died before the head could be extracted. In this instance, there was no positive knowledge as to the original position, as an ignorant negro midwife was officiating, and could give no information beyond the fact that the pains had been very severe, and had suddenly ceased. From the position of the child, I inferred that it had been either a breech or cross presentation, as the child was partly in the vagina and womb when my first examination was made, and the head was not presenting. The child here was much larger than the general average.

To have had two fatal cases from the accidents I have described, in ten years of general practice is, no doubt, an unusual experience, as the frequency of rupture of the uterus is stated by Burns to be one in nine hundred and forty cases; and in the experience of Ramsbotham, rupture of uterus or vagina occurs only once in four thousand eight hundred and eighty-seven labors. The accident of rupture of the vagina, is much more uncommon than that of the uterus, or of the uterus and vagina; but quite a number of cases are on record, some even having recovered, when the fœtus did not escape entirely into the cavity of the abdomen. At least, such is the inference from the statements in the authorities on midwifery at my command.

In a note to the article on Laceration of the Vagina, in the edition by Dr. Keating, of Philadelphia, Ramsbotham describes a case exactly like my own; and states that he would scarcely have supposed it possible for such an accident to occur without injury to the uterus or bladder, had not dissection positively convinced him of the fact.

What caused the accident? what could have been done to prevent it in the first place? and what procedure was best after its occurrence? are practical questions, which suggest themselves under the circumstances, and will be briefly considered. In the first case mentioned, there was no special reason to anticipate the accident; on the contrary, I had attended the patient before in a breech presentation, and the labor was completed without trouble. As there was certainly no interference on the part of the midwife, and no thought of the accident, in all probability, it would have happened all the same had I remained with the patient. I think that the rupture in this case must have occurred when the knees had just escaped from the os, and when they were driven against the anterior wall of the vagina—the force of this impulse being fatally increased by the fact that the uterine pressure on the fœtus had a tendency to double it up, or curve its spinal column forward; and the point of resistance being the brim of the pelvis and left ala of the sacrum, which, acting on the sacrum and curved lower part of the spine of the fœtus as on a wedge or inclined plane, drove the buttocks, and

more particularly the knees, upwards against the anterior vaginal wall, instead of permitting the former to follow the axis of the pelvis. Such is my explanation of the occurrence, until otherwise enlightened; and the only way it could reasonably have been prevented, would have been by the use of the blunt hook, and by traction downwards, so as to make the buttocks properly engage in the pelvic canal—a procedure hardly liable to have suggested itself to any ordinary practitioner. At least, I think very few would have realized the necessity for any interference at that stage of a breech presentation.

The question of what to do after the accident occurs, is one that has given rise to very opposite opinions amongst eminent authorities; but it would appear, from a monograph by Dr. Trask, in the *American Journal of Medical Sciences*, 1848, that from an analysis of three hundred and thirteen cases of rupture of the uterus from violence, gastrotomy exhibited a greater degree of success than any other mode of treatment. His views seem to have been confirmed by the experience of others in Philadelphia, especially in the case of Dr. Mason (*Trans. College of Physicians*, Phil., 1854), when recovery took place, the operation being performed by Dr. Neill twenty-four hours after the spontaneous rupture of the uterus, during labor.

From my present information, I think that, being present on the occurrence of a similar accident, I should be tempted to perform immediate gastrotomy—especially if the placenta was not detached, and there was evidence of vitality in the child, as was not the case with my patient. When the rupture was in the uterus, and the womb not contracted, version and delivery by the feet would appear to offer the best hope of safety to the mother. But when the child has passed entirely into the abdominal cavity, either through a rent in the uterus or through a rent in the vagina, I cannot see how the operation of gastrotomy would add much to her danger; and I think less violence would be done by the operation than would be inflicted in our efforts to deliver through the rent.

Cases of rupture of the vagina and escape of the fœtus into the abdominal cavity must be very rare indeed; hence I have

deemed my experience worthy of record, and hope that its perusal may prove a benefit to some professional brother under similar circumstances, when there may be no time for him to get an associate with whom to divide responsibility, or consult as to what had best be done. I thought, from a former experience, that the patient might die in a few moments, and my first impulse was acted on—that was to deliver as quickly as possible, and before the mother died. I did so in the way just then most practicable, and in a very satisfactory manner as regards the time consumed. The extent and nature of the injury, as revealed by the autopsy in this case, were so serious that recovery was apparently impossible—whatever course had been pursued.

Claiming no special skill or knowledge in this department of medicine, I submit these remarks for what they may be worth; and if my conclusions or explanations are not approved by those more competent to decide on such matters, I would gladly profit by their experience to obtain further and more correct information on this, the most serious of the many accidents that can befall the lying-in woman, as in “sorrow and travail” she expiates the primeval curse.

ART. IV.—**A Clinical Lecture upon Cutaneous Epithelioma.**

By I. EDMONDSON ATKINSON, M. D., Clinical Professor of Dermatology, University of Maryland, etc., Baltimore.

Gentlemen,—The patient I now show you is a widow, 67 years of age, living in Baltimore county. She has informed me that about seven years ago, a small spot, of pin-head size, came upon her left cheek. It was then partly scaly, and would, at times, discharge a scanty, thin fluid. Two years or more ago, a similar lesion made its appearance upon the bridge of her nose. There has been no other subjective symptom accompanying these, than a slight itching. At present, the spot upon the right cheek is 1 cm. in diameter. It is of a pale-red color, not ulcerating, perfectly soft, and scaly. No scar can be detected upon it nor in its vicinity. It is itchy, and, indeed, cannot be distinguished from a patch of scaly eczema. The spot upon the bridge of her nose has gradually and steadily extended, and is now 2.5 cm. in diameter, and is quite circular. It is distributed nearly sym-

metrically, and its borders approximate, but do not involve the inner canthi. The surface of this area is rather darker than the surrounding skin, and is, for the most part, covered with thin, desquamating epidermis. Little ulcers have, from time to time, our patient states, appeared upon this surface, and after healing, are seen to have converted it almost wholly into a superficial scar-tissue. There is now, at the lower border, a small brownish scab, which covers a superficial ulcer, whose base can be felt to be slightly indurated. Along the right inner margin of the patch, are arranged several granules, or pearl-like nodules, no larger than mustard seed. There are scattered about this margin several other thin scabs and some epidermic accumulations. The affected area, taken as a whole, is very slightly infiltrated, and occasions no pain, but some itching.

Scattered irregularly over the upper part of the face, are a few small spots, consisting of thin, grey and greasy-looking epidermic scales. These can be easily removed by the finger nail; and the surface thereby exposed, is seen to be moist, sticky, with here and there a tiny drop of blood. Notice, in addition, that all the glands of the neighborhood are in a perfectly healthy condition.

Finally, the patient presents an appearance of general good health, gives a healthy history, and is not aware of any member of her family having had cancer.

Neither the appearance nor the history of this patient could impress one not acquainted with the disease, as at all alarming; and yet, we have here a form of cancer—flat, superficial carcinoma, or epithelioma of the skin.

Allow me, however, without further discussion of this case, to pass to the consideration of another form of the disease, and to read the following extracts from my notes:

Mrs. K., a German widow, 64 years old, of slender frame, medium height and dark complexion, came for treatment to the Special Dispensary, June 10th, 1878. Four years previously, she noticed a pimple upon the left side of her nose over the nasal bone. Slowly it became an open sore; and last fall, the ulcer was destroyed with caustics. The result was successful, and the parts healed perfectly. There was no sign of re-appearance until April.

When I first saw her, there was an ulcer, situated at the margin of a bed of scar-tissue, 1.5 cm. in diameter, just below the left inner canthus, towards the median line. It was as large as a small shirt-button, and had clean, reddish edges.

The part in which it was imbedded was movable about the circumference of the ulcer, but attached to the bone at its base. Along the borders, were a few medium-like nodules. After removing a thin, dark-brown scab, the ulcer was seen to be funnel-shaped, of a reddish-brown color, moistened by a scanty, thin discharge. The edges were not everted, but were abrupt. The whole was considerably indurated. Pressure forced out a little bloody serum. The neighboring lymphatics were not involved. The family history seemed to indicate no cancerous antecedents.

Recognizing this ulcer as an epitheliomatous one, on June 17th, the patient being anaesthetized, I spooned it out with the dermal curette, as thoroughly as possible, and satisfied myself that the subjacent nasal bone was extensively implicated. I next introduced a crayon of silver nitrate, and carried this wherever the morbid tissues would yield before it. The point sank through the diseased portion of the nasal bone, as through a cheesy substance, making a free opening into the nasal cavity as large as a goose-quill. The crayon was made to burrow in every direction, until only solid, unyielding tissue was encountered. The pulaceous mass was then turned out, and the wound dressed with antiseptic cotton. Recovery was rapid and complete, and when seen by me, October 10th, the integument was continuous, and the destruction of osseous tissue was only made evident by a depression. There was no sign whatever of a renewal of the new growth.

The patient whom I now present to you is the subject of the following extract from my note-book :

Mrs. G., an Irish widow, slender and wiry, had always enjoyed excellent health. Eight or nine years ago, a little wart appeared upon her right cheek, near her nose. It gave no trouble, and remained almost unnoticed. Three years ago, it began to enlarge. It has never given pain, except when she assumed a stooping posture, when it would throb. I saw her first July 15, 1879, at the Special Dispensary. She then had a tumor situated upon her right cheek—its inner border almost reaching to the nose. The superior margin of this growth was 1.5 cm. below the lower lid. The tumor was nearly circular and evenly dome-shaped, measuring, in vertical diameter, 2.5 cm.; transversely, 2 cm. It projected nearly 5 mm. above the line of the surrounding skin, from which it sprung abruptly. It was smooth, red, and shining as if varnished. Its epidermis was continuous, except at five

or six points where minute excoriations were present. These were covered with small, thin, brown or black concave scabs. Beneath the epidermis, some red, sinuous lines (dilated blood-vessels) could be seen. The whole growth was freely movable, and did not involve the subcutaneous tissues. The skin, however, was affected in its whole thickness. At a few points of the periphery, very small scars were visible (from previous ulceration). The whole mass was slightly indurated. There was no glandular complication.

The diagnosis was here, again, cancer, but of the papillomatous variety—papillomatous epithelioma. Excision with the knife was here plainly practicable, but was positively declined by my patient, who also refused to submit to anæsthetization. Being thus obliged to forego the prospect of an immediate and speedy operation, I determined to have recourse to caustics. For reasons that I will presently explain to you, I selected the arsenical paste of Cosme as modified by Hebra. This paste is composed as follows, viz. :

R.	Acid arsenious.....	gram. 0.6 (gr.x.)
	Hydrarg. sulphuret. rub....	“ 2.0 (ʒss)
	Ung. aq. ros.....	“ 15.0 (ʒss)

M. S. Arsenical paste.

This paste I applied, spread upon lint, and protected by oiled silk and a compress. It was re-applied daily for four days, when the slough which had formed was dressed with a poultice. After this slough had cleared away, a granulating surface of pinkish color and of minute size was revealed. It being evident that the cancerous growth had not been completely destroyed, the paste was, in three weeks, applied as before for four days. The result of this second cauterization was most gratifying, and, as you may now observe, cicatrization is perfect. At one point, a tiny scale, not so large as a pin-head, may indicate a return of the new growth. This is very doubtful; but I have cautioned her to watch its condition narrowly.

The next case I wish to speak of presented still another—the infiltrating form of carcinoma, cancer of the lip.

This patient, Patrick F., was, doubtless, known to many of you as an inmate of this Hospital last summer. He was tall, slender, of feeble aspect, and 52 years old; of Irish birth. Five years ago, he had a non-parasitic sycosis, which began upon his left cheek, and speedily extended to the right side of his face. He was treated for this by Dr. Michael. It is now well, but has left a smooth surface of scar-tissue in its stead.

As, however, it is not to this feature that I desire to draw your attention, I pass to another point of the case. Two years ago, he first noticed a lump in his right lower lip. This gradually increased in size, and when seen by me, July 20th, 1879, it had attained the dimensions of a hickory nut, involving the entire thickness of the lip, and extending far down towards the chin, including both skin and mucous membrane. It was of gristly hardness. To the eye, it appeared as if glazed or varnished, and was superficially ulcerated. The lip was everted, and a stream of saliva dribbled down to the chin. The color of this tumor was a pale pink, and its excoriated surface was coarsely granular. A thin, serous fluid bathed it. The submaxillary glands were larger than normal, but did not give an impression of specific induration. Pain was an insignificant symptom. No family history of cancer could be obtained. This patient had upon his lip the deep-seated or infiltrating form of epithelioma.

Epithelioma—epithelial cancer of the skin—comprises three forms—the two milder ones, however, tending to run into the third, more malignant one. These are—

1. The superficial or flat variety.
2. The papillomatous variety.
3. The deep-seated or infiltrating variety.

First, let us consider a few properties held by these three forms in common.

Cutaneous epithelioma is a disease of advanced life, rarely occurring before the fortieth year, more frequently after the fiftieth year. It is said to be more commonly met with in males. Of all parts of the surface liable to it, the face is, beyond all comparison, the seat of election. Next in frequency, the genital organs are attacked by it; but it is not proposed to treat, in this lecture, of the disease as occurring in the latter parts. There seems to be an especial predisposition for epithelioma to attack those parts where there has been a congenital or acquired epidermic malformation, such as occurs in warts, moles, etc., or to start from spots where are those little accumulated patches of epidermic and sebaceous products, such as one frequently sees upon the integument of the aged, and such as I now point out to you upon the patient before you. Still further, the new growth tends to attack those individuals whose skins are, in their entirety,

of defective congenital organization. This plaster cast, for example, represents a papillomatous epithelioma upon the arm of a man 60 years old, who had had a simple ichthyosis since infancy. Strange to say, hereditary transmission does not seem to play the same important role in this affection as in some others.

Epithelioma of the skin usually begins as a nodule of minute size, and of waxy appearance; or it may begin, as already mentioned, in flat, greasy-looking, scaly spots of minute size. (Both of these conditions may be found in the patient I first presented to you; the scaly spots being distributed over various portions of the face; the little wax-like points imbedded in and slightly projecting from the margin of the patches upon the nose.) Or, the disease may begin in a wart or a mole, which may have been of life-long duration or of recent appearance. At all events, the beginning is usually so insignificant, that for a long time it may fail to attract attention. This is more especially the case in the flat or superficial form of the disease. At other times, as in the case of F., where the cancer is of the deep-seated or infiltrated variety, the new growth reveals itself first as a small tumor imbedded in the skin.

The mildest variety of cancer of the skin—the flat or superficial form—beginning as a tiny nodule, an abrasion, a scale, a small scab, may, and often does, exist for years without attracting more than passing notice. After several years, it may have developed a superficial ulcer no larger than a half-dime, with reddish, glazed, scantily-secreting base, often covered with a dark, thin crust, and slightly indurated; or, it may even be so small that ulceration will be scarcely recognizable, and yet the morbid action may have produced considerable destruction of tissue, whose place will have been usurped by a scar; for, while the ulcer may continue a small one, and always superficial, it will, in its course, have invaded a large tract—healing at one point, while invading new tissue at another.

I lately had an opportunity of seeing this form of epithelioma upon the cheek of an elderly gentleman, who had had it for a great many years. During all this time, the only ac-

tive lesion had been ulceration so very superficial and limited, that it was invariably covered by a little black crust, and had only attracted attention by its pertinacity. It appeared originally near the centre of the cheek; but when seen by me, it was near the tragus of the ear. But it had not made this change of location without leaving its trail behind it. The tissue between the little scab and the point of origin was no longer normal tissue. It was a superficial scar, and included a space nearly as large as a silver dollar. A noteworthy circumstance was, that the little ulcer, with its scab, had not travelled continuously, but had occasionally healed entirely at one point, to re-appear at another (and this behavior is often observed in the course of epithelioma). The new growth had been slowly infiltrating the normal tissue and causing its destruction. As repair and cicatrization took place in its wake, the disease was always progressive; and yet, in all these years, the ulcer did not increase in size and activity. It is now no more formidable in appearance than at the beginning, and is still going on as it began.

When, however, as is usually the case, in the course of time, a decided ulcer is formed, it presents peculiar characters. Its surface has a dry, shining appearance as if varnished, and its color is grayish-red or brownish-red. It is also coarsely granular. The scanty sero-sanguineous discharge tends to dry into thin crusts, and there is presented a general aspect of inactivity. The form of the ulcer is irregularly circular; its edges quite clearly defined; and to the touch there is a decided feeling of induration. Scar-tissue is frequently visible in the vicinity, attesting an attempt at repair. During this period, the limits of the corium may or may not have been exceeded; frequently, the new growth will have been limited to the superficial portions of the corium; at other times, deeper tissues have been involved. In the latter event, the disease may long retain its indolent course, or it may pass rapidly into the deeply-seated, infiltrating variety, and the gravity of the prognosis will be proportionately increased.

The flat, superficial form may last for years, even as many

as ten, fifteen or twenty years, and remain all the time a strictly local process, never giving rise to infection of the neighboring lymphatics. Indeed, it is not impossible for the new growth to become replaced by scar-tissue entirely, and the cancer to be thus permanently cured. This desirable result, unfortunately, is not frequently realized, and sooner or later, the superficial cancer becomes deep, and its ravages more rapid and alarming.

When this ulcerative process has become pronounced, but remains indolent, this variety of epithelioma, when upon the face, was formerly, and is still by many, especially in England, known as "rodent ulcer;" and its cancerous nature has often been denied. This view is, however, based upon the slight degree of malignity attached to this form of ulcer, and to its supposed histological peculiarities, insisted upon by many English pathologists, headed by no less an authority than Sir James Paget, who deny that the new growth is of an epithelial nature. This view, however, is now quite untenable, and it is certain that "rodent ulcer" is histologically allied and identical with carcinoma. The clinical relations, indeed, of this form of ulcer are often so intimate with the other forms of the disease that it becomes impossible to separate them. The condition known as "rodent ulcer," therefore, is a pronounced variety of milder epithelioma, and partakes of the very moderately malignant nature of this. And since there is no longer any doubt as to its identity, it will be proper for me at this time to put you upon your guard against falling into the error of imagining differences that do not exist. Remember, then, that the so-called "rodent ulcer" is simply an ulcer of the face, of chronic course and cancerous nature.

When the ulcer assumes the characters of infiltrating epithelioma, it reveals the action by involving, not only the skin and subcutaneous cellular tissue, but also the underlying muscles and bones. To these it becomes immovably attached. This tendency, indeed, may be present from the very first. Under such circumstances, the beginning may be, as in the flat form, from a wart or fissure, etc., or it may be

from a small nodule imbedded in the skin. This slowly increases in size; new nodules arise about the margins, and there is formed a smooth, indurated, slightly elevated mass. In the meantime, the new growth is reaching down its prolongations into the corium, crowding out, in great degree, the blood-vessels, the sources of its own nutrition. Just as any tissue or individual, when deprived of its aliment, dies, so do these epidermic prolongations die when their vascular food-supplying tissues disappear before them. Thus, the dead epidermic masses, separate from those not yet sufficiently removed from the food supply, and fall away from them. In this manner is formed the carcinomatous ulcer of whatever variety.

The infiltrating epitheliomatous ulcer now makes more rapid progress. It becomes deep, circular or oval, with hard, unyielding edges, precipitous but not undermined. Its surface is granular or smooth, of a reddish or brownish varnished appearance, and discharges a small amount of ichor, which dries into a thin scab. The infiltration still stretches downwards, involving bones, muscles, whatever structures it meets, replaces them, and forms a solid unyielding mass. The boundaries of the ulcer continually enlarge, and frequently there appear nodules of waxy appearance, masses of epidermis cells—the advance guard of the main army, preparing to extend the widening surface of ulceration. The neighboring lymphatics no longer possess an immunity as in flat carcinoma; but infected with the now malignant process, become enlarged, hardened, and finally break down into ulceration, and become continuous with the original lesion, or enter upon a separate course of destruction.

Infiltrating epithelioma may destroy life in a few months. When its course is less rapid, it may exist for sometime, with its margin studded with nodules, or presenting a continuous border, with the waxy appearance of crumbly epidermic masses. This condition may last for a long time, but sooner or later, if not arrested by treatment, the progress of the disease will destroy life through exhaustion, mal-assimilation, pain, sleeplessness, and the accompanying train of disorders.

You will remember that I described the third case, that of

Mrs. G., as one of papillomatous epithelioma. There, the tumor while not penetrating beyond the cutis, arose abruptly above the surrounding surface, not unlike a large button. Its slightly scarred surface was, except at a few small ulcerating points, covered with a smooth, thin epidermis. Papillomatous epithelioma may also assume the appearance presented by this very imperfect plaster cast. The patient was a woman, forty-six years old, a laundress. The new growth had begun two years previously as a small pimple upon the dorsal surface of the metacarpo-phalangeal articulation of the left thumb. It gradually spread until it attained the dimensions seen upon the cast (five cm. transversely by three cm. antero-posteriorly). When I first saw it, the appearance was that of a huge warty growth, as seen about the periphery; but as the margin had extended, a destructive ulceration of a very insignificant aspect had been going on in the centre, visible only at scattered and minute points. The central cicatrix, the result of the healing of the ulceration, formed a pale, depressed surface of the size of a quarter of a dollar, surrounded by the centrifugal papillomatous elevations. This form of epithelioma may also appear in the course of the other two varieties, and may either be superficial or deep, or the three forms may co-exist. In any case it gradually and surely assumes the characters of the infiltrating form.

The *diagnosis* of epithelioma of the skin, usually need occasion but little difficulty. Syphilis, both in its initial and later manifestations, lupus, and finally, simple warty growths, may be confounded with it. An infecting chancre may present characters not to be distinguished from cancer. The history, the rapidity of development, the acute course, and the early implication of the glands in the vicinity, usually enable us to distinguish a chancre; while the subsequent course of a cancerous ulcer, cannot allow us to remain long in doubt. A tertiary manifestation of syphilis may likewise cause hesitation; but here, again, there is the history, the usual concomitant conditions, the general appearance and course of the sore, whose evolution is rapid, inflammatory, actively suppurative, and readily amenable to appropriate internal medication. Lupus may be mistaken for epithelioma.

But although lupus may be encountered in elderly persons, in them it will be found to have been present since youth, for lupus is essentially a malady of early life, though it may last indefinitely; while cancer of the skin, although occasionally seen in young people, is almost invariably a malady of advanced life, and rarely occurs before the fortieth year. The ulcer of lupus is superficial, without induration, and is usually accompanied by characteristic lupus tubercles. It, moreover, is not apt to invade osseous tissue. It is not always easy to decide between the scurfy accumulations, simple warts, etc., upon the faces and other parts of elderly people, and commencing cutaneous epithelioma. It must, therefore, be a matter of the highest consequence to narrowly watch the course of such formations in the aged, especially where they first appear in advanced life; for who is able to recognize the transition stage, where benigna merges into malignant new growth?

While it happens rarely that cutaneous epithelioma ends in spontaneous cicatrization and permanent recovery, it is by far the more usual experience to find it sooner or later assume all the features of malignancy and destroy life. We have seen how the superficial form often remains inactive for many years; on the other hand, life may be forfeited in a few months. But while skin cancer, if left alone, almost invariably pursues a fatal course, there can be no doubt that by appropriate interference it may be frequently arrested and permanently cured, especially in its earlier stages. It is true that one is often obliged to make more than one attempt to control the disease, and even then to encounter failure but too often. But by repeated destruction of the recurrent malady, one may fairly expect to finally triumph.

It follows that where the natural tendency of a disease is towards a fatal end, a large portion of the labor of medical and surgical minds should have been devoted to the task of devising relief from the dreaded scourge. There has resulted a multitudinous array of remedies—some worthless, others of more or less value. No disease has been attacked with a greater variety of remedies than cancer, both by internal and external application. I only desire to speak

of preparations administered internally, as specifics against cancer, in order to condemn them. From time to time, the world has been startled by the discovery of a "new and certain cure for cancer," which, after a brief notoriety, has been consigned to the waste basket of experience.

Far otherwise is it with remedies locally applied; for at present there can be no doubt that epithelioma may be entirely and permanently cured by thorough removal of every particle of its structure from the tissues in which it is embedded. Unfortunately, this statement can only be made in a limited sense; for at best, it is usually necessary to practise more than one operation, and we can only hope to secure a permanent restitution to health in a portion of our cases. One reason for this is to be found frequently in the inaccessibility of the infiltrating masses. But apart from this, where this difficulty is not encountered, the healing art often fails, and the eye of the pathologist is unable to trace the path of the insidious invader.

The therapeutic agents at our disposal, are those which, by direct mechanical or chemical action, secure the removal of the infiltration. They have the same object in view, but attain it in different ways. With the scalpel, the mass may frequently be thoroughly removed. The same result may be attained with the dermal curette, which I now show you. Finally, the use of caustics will, nowhere more than in these cases, sometimes effect marvels.

Where the tumor or ulcer is situated upon an easily accessible part, where the loss of a large quantity of healthy integument with the resulting disfiguring cicatrix is of no moment, no one will question the greater value of the knife. The same instrument is, indeed, most appropriate in operations upon exposed parts, where the cancer is small, regular and well defined. But cutaneous epithelioma occurs, in the great majority of cases, upon that part of the body where deformity is most to be dreaded, and where small scars may produce the most unsightly disfigurement, namely, the face. Unfortunately, the knife cannot select the morbid from the healthy tissues, and in order to thoroughly remove every bit of the former, large portions of the latter must often be included.

Thus is frequently incurred dreadful disfigurement without commensurate advantage. It is our duty, therefore, to search out agents capable of effecting the same results with the least possible destruction of sound structure.

The dermal curette or spoon, introduced into cutaneous therapeutics by Volkmann, of Halle, enables one to spoon out thoroughly all heterologous growth, while it is with the extremest difficulty and perseverance that one can tear out normal tissue. With it the crumbling elements of the cancer can be scraped away, without injuring the healthy skin. It is a most valuable instrument, as I have found by experience, but I am inclined to think that its greatest usefulness is to be found in its employment as preliminary to other agents to be presently mentioned. It is, evidently, a difficult if not impossible task, to search out with the curette, all the elements of a cancerous infiltration tucked away in the interstices of healthy tissue; and, without doubt, one will frequently fail to effect their necessary complete removal.

Another agent of great value, is the actual cautery, employed either as the hot iron, electro-cautery, or, preferably, as the thermo-cautery of Paquelin. We have here, however, the additional disadvantage that the cautery has no choice between the tissues; and one can never know when the limits of the neoplasm have been exceeded. This objection also prevails against the use of the stronger potential caustics, such as potassa fusa, nitric acid, etc. These are, undoubtedly, unexceptionable agents for the destruction of tissue, but nothing can withstand their action. They involve all structures in a common ruin, and we are driven to employ various substances to check the destructive activity that we cannot otherwise control. Where, however, the object to be attacked is very small and circumscribed—in other words, where the epithelioma is in its earliest stages—these may be most profitably used.

It is, therefore, most fortunate that we possess other caustics whose more limited action renders them in these cases more valuable by far. As has already been remarked, with the knife and the most powerful caustics, it is often impossible to avoid far exceeding the limits of disease. This is es-

pecially the case where islets or tongues of healthy integument are enclosed by, or project into the new growth. The caustic agents I now wish to make you acquainted with, enable us, when we apply them, to destroy the morbid mass, without affecting any portion of healthy skin. By them, the cancer is dissected away with the greatest exactitude.

First of all, let me mention that mild caustic, which of late years has been almost banished from the class of escharotics—lunar caustic, silver nitrate. This agent may be appropriately fixed in a *porte-caustique*, or better still, in a goose quill, and its point driven into the morbid mass. It will, with gentle pressure, sink down until the healthy tissue is encountered. The point is now ploughed in all directions, wherever it will go—the epitheliomatous tissue melting away before it. When all of this has been destroyed, the point will be found to encounter unyielding resistance in every direction, and the operation is finished. If cicatrization be not complete at the end of a month, the process may be repeated. It will often be found advantageous to use the silver nitrate after the dermal curette has removed all the grosser parts—a method I am about to put into practise upon the patient now before you.

It will frequently happen that a patient will not consent to submit to the necessary anæsthetization, or will refuse to submit to any operative procedure whatever. We still possess remedies that will effect our object in a slower manner. Arsenic may be used here in preference to other remedies. Mixed with an equal part of gum arabic, it may be applied, as Marsden's paste, and allowed to remain undisturbed for two hours or so. The resulting slough should be poulticed. I have, however, no experience with this procedure, and will not speak further of it.

I have had every reason to be gratified with the use of Cosme's arsenical paste as modified by Hebra, the composition of which I have already described. The method of its application, as recommended by that most distinguished dermatologist, and always observed by myself, may be briefly described.

It having been decided to use this method (and in cases of

moderate extent and intensity, it is most suitable), the surface of the epithelioma should be carefully cleansed. The paste, spread upon a piece of sheet lint to the thickness of a knife-blade, and corresponding to the surface of the new growth, should then be applied. A piece of oiled silk should be placed upon this, and over all a compress, held in position by adhesive strips. By the following day, the patient will have begun to experience throbbing and some darting pain in the part, and upon removing the applications, the surface will be found to be swollen and reddened for some distance beyond the margins of the disease. After careful washing, the paste should be applied as before. Before the next dressing, which should be upon the following day, pain will have become very severe. By the end of the third day, or perhaps not until the fourth day, the parts will have become greatly swollen and reddened, and the surface of the epithelioma will be of a dark brown, charred appearance. The pain, which for the latter twenty-four or thirty six hours will have been very severe, should be controlled by opiates. The redness and swelling need occasion no apprehension, since in a few hours after the removal of the caustic, they will disappear. A poultice should be applied until the slough begins to separate, which will be in a few days. At the expiration of a few weeks, this procedure may be repeated if any tendency to a recurrence of the disease be observed.

I have employed this treatment frequently, and have every reason to be satisfied with it. Its disadvantages are the protracted pain and the length of time required. The first we can control with anodynes; the second will often be preferred by the patient to the use of anæsthetics and the more speedy operation. The result is, in suitable cases, always equal, sometimes superior to that attained by the scalpel. The risk of arsenical poisoning is, here, practically *nil*.

Pyrogallie acid, in the form of a ten per cent. ointment, with vaseline or lard, has lately been recommended by Kaposi and others in the treatment of epithelioma, as a caustic agent; but, although I have used it, I am unable to give a decided opinion of its merits.

In conclusion, let me remind you that there are limits to our usefulness in this disease. Where there exists very great and wide-spread cancerous infiltration, or where the glands in the vicinity have become infected, we can rarely stay the progressive and destructive process. The enemy is a strenuous one, at best, and often defies our efforts. With the knife, the dermal curette, the actual and potential caustics, much may be accomplished in prolonging life, and in permanently overcoming the disease. But let it not be forgotten that the most good can be done when the disease is attacked early, vehemently, persistently.

A time will, nevertheless, often arrive, nay, may have already arrived when you are first consulted, when you may no longer hope to check the malignant advance. While powerless to cure the disease, or even to prolong life, in such cases, you may at least lend a supporting hand, and guide the failing footsteps along easy pathways, down into the dark valley.

223 Madison Avenue.

ART. V.—(1) **Cirrhosis of the Liver**; (2) **Aneurism of the Abdominal Aorta Resulting from a Blow.** A Clinical Lecture in Bellevue Hospital, by ALFRED L. LOOMIS, M. D., Professor of Pathology and Practice of Medicine, in the Medical Department of the University of the City of New York, etc. (Reported for the *Virginia Medical Monthly*.)

(1) **CIRRHOSIS OF THE LIVER.**—This patient is the one we presented to you at our clinic five weeks ago. You will remember that she was unconscious and delirious, and also, that she was jaundiced. The diagnosis rested between some malignant disease of the liver and cirrhosis. The liver was very much increased in size, and the condition of the patient, in all respects, was a bad one, and it seemed at that time as though she would not recover. She became even more ill after the clinic; her stupor was more marked. We then took into account the fact that alcoholism was present to a greater or less degree. She has been coming out of this condition gradually; the jaundice has almost entirely disappeared; the liver has steadily, but not rapidly, diminished in

size. In the earlier stages of cirrhosis, the liver is rather increased in size. That was undoubtedly true in this case; but since the time this woman has been under observation, there has been a gradual diminution of the size of the liver, and with it an improvement of the condition of the patient.

Now, it is often the case with these persons who have acute alcoholismus, and who are in that stage of cirrhosis of the liver in which the organ is increased in size, that they have evidences of bile poisoning; they have delirium; sometimes they are in a state of lethargy; they have a dry mouth, a dry tongue, and a typhoid condition, and seem to be going on to a fatal issue, when a change takes place. These symptoms gradually disappear, and the patients improve. But this improvement does not indicate that they are going on to recovery.

This woman's health has improved, and probably will continue to improve for some time yet; but complete recovery will never take place. She will probably next have some gastric trouble, some œdema of the feet, and finally reach that condition in which there will be contraction of the liver, with interference of the portal circulation, causing ascites, and death will be the final result. This result may be delayed for a considerable time, in many cases, if the individual will adopt the proper hygienic method—abstaining from all stimulants and taking plenty of exercise; but it is unfortunate for these persons that they cannot control their appetites, and as soon as they are beyond restraint they return to their former habit of drinking; and the changes in the liver, the interstitial hardening, etc., go on more rapidly; and finally, life is limited to a short space of time, whereas it might, perhaps, have otherwise been prolonged for several years.

I have brought this patient before you to show how great an improvement has taken place in her condition; and further to impress upon your minds the fact that, while great improvement may take place in these cases, we do not hope for a complete and permanent recovery.

(2) ANEURISM OF THE ABDOMINAL AORTA FROM A BLOW.—The next patient is a man, fifty-one years of age, who became sick in July, 1879. I will repeat his history as he gives it. He has had a good deal of sickness during his life; has had Chagres fever (broken bone fever), inflammation of the lungs, bronchitis, etc. His business is that of a ma-

chinist and engineer; and he has run on a New York vessel to Chagres. He is married, and has had several children. When a young man, he had gonorrhoea several times, and was in the habit of exposing himself to conditions which would favor the contraction of syphilis; but he does not know that he ever had the disease. A year ago last July, he was taken with pain in his back, midway from the shoulder-blades to the end of the spine. This pain, which was of a darting nature, has continued to the present time. It got worse, so that he had to quit work. At first it was made worse on lying down, but after five or six months, it has not seemed so bad when he lays down. A weakness about his hips came on with these pains, causing him to walk lame. He also had pain in the hip when he walked. After a while, he began to loose flesh, because the pain was so severe that it deprived him of sleep. He now weighs fifty or sixty pounds less than he did a year ago last July. He has had no vomiting, no pain in the stomach—no pain, indeed, except in his back and about his hips; his bowels have been regular up to within the last three months. Two years ago, a policeman struck him across the back with his club, near the part where he feels this pain. He was immediately afterwards unable to move for an hour or two, and was taken to the police station, where he remained until he was able to go home, which was within about an hour and a half. He felt the effects of the blow during the next day. He was bending over a counter picking up a twenty-five cent piece when he was struck on the back with the club.

Gentlemen, you have the history of this case. Four of you may come forward and make the diagnosis. What would you look for?

First student—"Lumbago."

"What is lumbago?"

"Rheumatism."

"Is a man likely to have rheumatism as the first manifestation of rheumatism?"

"He may."

"That is, you think a man may have lumbago who never had any other rheumatic manifestation. Well, that is possible, but not probable. Do you think a pain in the back, of a year and half duration, severe enough to keep a man from labor, is likely to be simply rheumatic?"

"It may have been aggravated by the injury."

"What do you think the injury was, if he received one?"

"I think it possible the blow struck the spinal column at a point where a nerve makes its exit, and injured the nerve."

To the second student—"What do *you* think?"

"I think it is a tumor of the aorta."

"What kind of a tumor?"

"An aneurism of the abdominal aorta."

"Why do you think that?"

"Because of the pain which has come on gradually."

"How would it cause pain in the back?"

"By pressing on nerves."

"That is, pressure on nerves after the body of the vertebrae had been eroded and absorbed by pressure? Then you think it is an aneurism of the abdominal aorta, the result of a blow; and that it is possible by a blow to rupture the walls of an artery which has not been diseased beforehand? This man does not seem to have had syphilis, and he does not seem to have had rheumatism. He may have had Bright's disease, yet he does not give any symptoms of it; but we will not discuss this point at present. There is one thing noticeable in this man's case; he is relieved when he draws his knees up."

"We will now make a physical examination. His countenance does not indicate a cancerous cachexia. You notice there is a falling in of the abdomen rather than an enlargement of it. Do you notice anything else?"

"I notice an impulse near the umbilicus."

"Put your finger on it, and you can feel it better than you can see it. What do you feel?"

"It gives a kind of vibration to my finger."

"This gentleman sees a motion, and on putting his hand on that place he feels an impulse. That impulse is not up and down, but lateral, and has a sort of purring thrill, such as you get when you put your hand on the back of a purring cat. The impulse is deep-seated. I suppose that you who are near by can see the motion conveyed to my hand. That impulse is not carried below the umbilicus, but the same impulse that is most distinct to the left is also noticed on the right side of the median line."

"I will percuss him gently. Will you tell me at what point near the median line I should strike dullness over the border of the left lobe of the liver, when it is in its normal position?"

"Midway between the zyphoid cartilage and the umbilicus."

The area of dullness is increased in this case toward the

median line down nearly to the umbilicus. There is a tympanic quality to light percussion, but there is flatness when I make firm percussion. Now, that is quite an important point to remember. If, on light percussion, you get a tympanic quality percussion sound, whereas on firm percussion you get flatness or dullness, this latter fact indicates that whatever gives rise to the flatness or dullness of percussion sound lies behind the intestine; hence, we know the liver is not the cause of the dullness in this case, for if it were, the dullness would be superficial; dullness would be obtained on light percussion, whereas the percussion sound is dullest on firm percussion. The light and the heavy percussion enable you to determine whether a tumor or solid mass is situated behind or in front of the intestine, and that is frequently an important point for you to determine.

When I grasp this tumor firmly with my hand, I notice an impulse conveyed in every direction, to the end of my fingers and to the centre of my hand. Therefore, it is not simply a heaving impulse, and is not due to a tumor pressing upon the artery; but the fact that the impulse is conveyed in every direction, and is accompanied by a purring thrill, proves that this line of dullness is not due to a tumor pressing upon the artery, but that it is connected with the artery itself.

Auscultation gives us a distinct, harsh, grating sound just below the zypoid cartilage, which can be heard down to the umbilicus, beyond which point it disappears. It occurs with the radial pulse, and with the apex heart beat; therefore, we say it is with the first sound of the heart. It is a very harsh sound—not a blowing sound, such as would be produced by pressure of a tumor upon an artery. Tumors develop quite frequently in front of the abdominal artery, pressing upon it, giving rise, not only to an impulse, to a heaving motion, but also to a murmur—a blowing sound. But the blowing sound, under such circumstances, is soft; but here it is very harsh, occurring with the first sound of the heart.

You think a murmur connected with an aneurism almost always occurs with the first sound of the heart? That is the rule, but it may occur with the second sound. Where there still remains enough elastic tissue in the walls of the aneu-

rism to contract and press out the blood into the artery after the aneurism has become full, it will give rise to a murmur which will occur with the second sound of the heart. But that is not likely to occur in an aneurism of the abdominal aorta; it might in an aneurism of the thoracic aorta.

It is well to get these patients on their hands and knees, and grasp the tumor firmly, so as to determine whether it is fixed or not. Now, pressing on his back opposite the location of the impulse in front, I give him some pain. He objects to being put on his hands and knees, because it gives him pain. Now, here is an important point which I wish to impress upon your minds in regard to these cases, namely, the presence of pain in the back. Every year patients are sent to me to determine whether a diagnosis of abdominal aneurism, based alone upon the presence of an epigastric impulse, is correct. I have yet to see a case of abdominal aneurism in which pain in the back was not the earliest and a constant symptom. This pain is made worse on motion. There is more or less stiffness of the thighs, and walking is interfered with on account of pain which it causes. The rule is, that these aneurismal tumors enlarge backward, and by pressure upon the bodies of the vertebræ, cause an absorption of their substance, and give rise to pain. I have seen cases where this absorption was so great that an opening had been made into the vertebral canal, and you may imagine the amount of pain a person must suffer under such circumstances.

This man does not give us a syphilitic history; he is too young to have the atheromatous change of the arteries which is seen in the aged; he has never had rheumatism; he gives us no history that would indicate general arterial degeneration. Aneurisms which occur in early life, before the forty-fifth year of age, are almost always the result of syphilis, of a gouty diathesis, or of chronic rheumatism. This man, as said before, has given us no history that would lead us to suppose he has general arterial degeneration; yet we recognize the fact that no aneurismal tumor ever develops in an artery except in case of arterial degeneration. A simple blow on an artery will not produce a rupture that will lead to an aneurism, unless a degeneration of the artery takes place at

that point. But a blow on an artery may excite at the point of injury an inflammation; and secondary to this inflammation, endarteritis may be developed, which may lead to an aneurism. This is probably the condition of things in this case.

There is another point which is interesting in all cases of aneurism, but especially so in this one. I find that the apex heart-beat is not carried to the left beyond the normal position; there is no indication of hypertrophy of the left ventricle. It is remarkable how large an aneurism may exist, and yet contrary, probably, to your expectation, not cause hypertrophy of the heart. Slight hypertrophy of the left ventricle may occur, but you may have large aneurisms without hypertrophy of the left ventricle, whereas in case of obstruction from degeneration in small arteries, as occurs in Bright's disease, hypertrophy of the left ventricle will take place early.

Clinical Reports.

Fracture of Both Clavicles—Rupture of Perineum, and Right Inguinal Hernia. By M. GARD. WHITTIER, M. D., Houtzdale, Clairfield Co., Pa.

Peter Naturele, æt. 35, born in France, coalminer, Houtzdale, Pa. At 8.30 A. M., on the morning of the 9th of May, 1879, some coal fell and caused the injury stated in the caption of this report. His knowledge of English being limited to a few words, and my knowledge of French being likewise limited, I found it difficult to obtain a history. After some delay, I found fracture of the right clavicle, which was obscure as to most of the usual signs. He had no difficulty in placing the hand on the head or opposite shoulder, and there was no deformity. But by manipulation, the fracture was discovered. I put the limb up with adhesive plaster.

On my second visit at 2 P. M., he called my attention to the other shoulder; and with little trouble a fracture was detected. There being but little tendency to displacement, I merely put the arm in a sling, and confined him to a position on the back in bed. I examined the abdomen and found no bruises.

May 10th, 8 A. M.—Patient has passed no urine, but a few drops of blood. On examination, I found a dark line extending from the anus forward over the testicles, with some swelling and tenderness. No one spot seemed bruised more than another, and the skin was unbroken. I very carefully attempted to pass a catheter, and found it arrested at or near the membranous portion of the urethra. Considerable blood followed the withdrawal of the catheter. I sent for Dr. T. R. Blandy, of Osceola, who after *gentle* attempts to pass the catheter, concurred with me that section of the perineum was demanded. As the patient was not suffering much, and the Doctor was having a severe attack of sick headache, we concluded to postpone the operation until the next morning.

May 11th, 6 A. M.—The patient complained of some burning, as if making water, during the night, but was made comfortable by half grain dose of morphia sulphate. The bladder formed a tumor in the abdomen as large as a man's head, and the discoloration of the perineum extended laterally. The patient was put in the usual position for lithotomy, and chloroform, sulphuric ether and alcohol, in the proportions of three, two and one, in the order named, were administered, and acted kindly. A catheter was introduced as far as the rupture as a guide; and the section, two inches in length, was made. The rupture was easily found, but diligent search for over an hour failed to find an opening into the bladder. Every tissue seemed bruised and infiltrated; and in the dilemma, it was decided to extend the dissection on through the deep perineal fascias until the bladder was reached, and if the vesicular end of the urethra could not be found, to puncture the bladder and afford temporary relief, and thus avert to a certain extent infiltration of urine. The dissection was made until the bladder could be felt distinctly, when a little search with the catheter caused it to slip into that viscus, and water flowed in a full stream without *blood*, showing the injury to be confined to the urethra. We tied in a female silver catheter, letting it protrude through the perineum, and put in a cork. At 12 noon, I visited the patient and found him bright; no pain, and pulse 88. By removing the cork, four ounces of urine passed. We applied clothes wrung out of cold water to the perineum. Ordered urine to be drawn every four hours, and morphia sulphate, half grain, to ease any pain.

May 12.—Pulse 86; rested well; removed the silver catheter and introduced a gum one through the penis; the end

was tied into a pint bottle, and the urine allowed to run as secreted. In the evening the pulse was 98; some thirst.

May 13.—Rested well; pulse 92; water clear; passed over a pint of urine during the night.

May 17.—Bowels moved every day by injection; pulse has ranged between 80 and 90; bowels a little tender. The catheter accidentally slipped out, and I could not replace it.

May 18.—Passed the water twice through the perineum; bowels less tender, and he feels better than any preceding day. Ordered one grain of quinia sulphate every four hours.

May 23.—Bowels are not easily moved by injection, and I ordered mass. hydrarg., grains ten, followed by sulphur, which acted promptly. Was able to pass a catheter through the perineum and draw off the water. Doing well.

May 28.—Have been drawing the water three times daily, but it has caused so much irritation of the urethra and bladder, I have decided to use it every other day, and let it flow from the perineum at other times.

May 31.—The glands in the right groin are tender and painful. The application of ice in a bladder over the perineal wound prevented suppuration.

June 7.—The urethritis was treated with a weak solution of plumbi acetat, and soon improved; bubo better; wound in perineum doing well.

June 26.—The patient has been out daily since last note. On urination, considerable burning, with profuse discharge of matter, occur. The opening in the perineum will only admit a medium-sized catheter.

July 10.—Since the last note, he has progressed, with the exception of the opening in the perineum, which remains patent. This I touched with acid nitrate of mercury, one-half strength, and ordered the urine to be drawn off with a catheter. This having no effect, I applied the mercury of full strength on a knitting needle, and it closed the wound in twenty-four hours, and gave no further trouble.

The inguinal hernia was treated with a truss, and the man returned to his work, and has been well since. He passes a steel sound, once a week, which keeps a good urethral diameter up to the present date, December 16, 1879.

This case may be of service by calling the attention of practitioners to this accident, which, although quite rare, calls for prompt treatment. Text-books are rather meagre on the subject. Gross gives less than half a page. And from my observations in this immediate vicinity, the catheter

is used as the last resort. In one case, the attending surgeon used force enough to enter the bladder, but probably not through the neck but the lateral walls. General peritonitis closed the scene on the following day.

In another case, infiltration of urine and subsequent death occurred.

Therefore, let me say, use the human urethra as carefully as the *eye*; and when there are symptoms of collection of urine in the bladder, following injury to the perineum, *do not churn* a silver catheter for hours, or a single moment, but resort to perineal section and save your patient's life.

An Intra-Uterine Fibroid Complicating Labor, and Causing Uncertain Diagnosis. By ROBERT F. GRAY, M. D., Danville, Va.

On December 15th, 1879, a colored woman was delivered of a full-term child by a colored midwife. The placenta being delivered, and the midwife, seeing there was something retained in the uterus, sent for Dr. Barksdale on December 16th.

Dr. Barksdale found the os contracted, but was unable to make a satisfactory diagnosis. He, being unwell, requested me to see the case on Wednesday evening, December 17th.

I found the os still contracted, but I was unable to make a further diagnosis. The patient said she felt the movements of the child distinctly. I found there was some peritonitis; the pulse was 120 per minute. On the 18th, I requested Dr. Temple, a skillful diagnostician, to accompany me to see the case. He likewise found the os contracted, and could by no means enter the uterus to make a positive diagnosis. The woman still said she felt the fetal movements, and the midwife contended that the *child* had changed its position.

After consulting with several eminent physicians, we decided to make an attempt to dilate the os and deliver the *supposed child*. We hesitated about this on account of the severe peritonitis and septicæmia. The latter we thought was indicated by rigors and profuse perspiration. But feeling that something should be done, we proceeded to place the woman under an anæsthetic, and to dilate the os. We found the latter to be impossible.

On December 21st the woman died, and, on the husband consenting, we made a *post mortem* examination, with the following result: The peritoneum indicated the existence of

peritonitis; the uterus gave evidence of severe metritis; and contained in the uterus, and attached to its walls, was an immense fibroid about the size of a man's head, which nearly filled up the cavity.

I make this short and imperfect report of the case on account of its novelty. It seems wonderful that a woman could carry a child to full-term in a uterus filled with such a large and firmly attached tumor.

Congenital Deformity, Probably Due to Maternal Impression.

By W. T. HOPE, M. D., one of the Attending Physicians to City Hospital, etc., Chattanooga, Tenn.

Much has been written *pro* and *con* on the subject of maternal influences. Without stopping to discuss the subject in any of its manifold bearings, I will simply relate the circumstances of a case which came under my observation, that, to say the least, affords a striking example of a coincidence for the non-believer in such influences, or a corroborating fact to the mind of the believer.

Oct. 16, 1879.—I was called to see Mrs. E., the mother of five children, who is noted for her physical strength and endurance. I found that she had just been delivered of a premature fœtus, having been somewhere from six and a half to seven months in utero, well formed and perfectly developed in body and limbs. But on examination of the child's head, I found a striking deformity. The chin was almost on a plane with the neck, projecting very slightly; the mouth very broad, the nose short, the eyes very prominent and protruding, the forehead rapidly receding from the brows, the top of the head being somewhat pointed, and exceedingly small. In fact, it might be said that the head was all taken up by the face. Only a small quantity of hair covered the extreme posterior part of the occiput, just above the neck.

Now, the cause of this deformity is said to have been due to a sudden fright of the mother at the sight of an Italian organ grinder's comical monkey, which she supposed had bitten one of her children. This accident occurred when the woman was about three months advanced in pregnancy.

Having frequently seen the monkey myself, I could not refrain from the thought that nothing was lacking to make

the resemblance complete but the usual red flannel shirt and cap, and an artificial tail, and the child would be ready to march around for the pennies when the music had ceased.

It is not necessary to say that it was fortunate for mother and child, that it did not reach maturity to be born alive, as I can see no reason why it should not have lived, had it reached its full time of gestation.

My only apology in recording this case is, that it may possibly be of service to those in search of facts on this subject.

Original Translations.

From the German and French. By WM. C. DABNEY, M. D.,
Charlottesville, Va.

Section of the Ciliary Nerves in Sympathetic Ophthalmia.—This operation, which has been performed repeatedly during the past year by Dr. Chisolm, of Baltimore, with great success, seems to be attracting attention abroad. The subject was discussed at a meeting of the Société de Chirurgie, on the 17th of December last. M. Giraud-Teulon opened the discussion by reading a review of two papers on the subject—one by M. Dianoux, and the other by M. Abadie—recently published. He referred also to the thesis of M. Redard (a pupil of Abadie) published a short time since.

M. Dianoux reported four cases, and M. Abadie eighteen. To these, Dr. Giraud-Teulon adds seventeen collected from other sources, making a total of thirty-nine cases in which the nerves had been cut, supplying the ocular globe, in place of enucleation.

The advocates of this operation claim for it, said M. Giraud-Teulon, (1) That it is less serious than enucleation. (2) It enables the eye to be preserved, and hence adds greatly to the appearance. (3) It is efficacious, in that it relieves the pain and prevents trouble in the other eye.

M. Giraud-Teulon considers each of these propositions separately. He begins with the second, and asks the question, does the eye preserve its vitality and transparency? He confesses that the cases thus far reported seem to furnish an affirmative answer to the question, but says more time is needed before the matter can be definitely settled.

[Dr. Chisolm, whose ability to judge in the matter is un-

questionable, is satisfied that the results, in properly selected cases, will be permanent, and his own success has been most encouraging.—*Translator.*]

M. Giraud-Teulon next asks, Is division of the nerves efficacious? He thinks a doubtful answer only can be given to this question, and says, "all that can, with propriety, be claimed by the authors of the articles, as yet, is, that the danger of sympathetic ophthalmia is lessened by the operation."

On the other point—the harmlessness of the operation—he says that it is much more difficult and more dangerous than enucleation; indeed, he considers the manual operation a difficult one. The flow of blood is more difficult to arrest than when enucleation is practised, and hæmorrhage occurred eleven times in thirty cases.

[Dr. Chisolm, it will be remembered, has shown how useful this free flow of blood, back of the eye, is in preventing a re-union of the divided nerves.—*Translator.*]

In conclusion, M. Giraud-Teulon says that, while he thinks the new operation, under some circumstances, may be advisable, he yet believes that enucleation will prove generally the best mode of treating such cases, since it is more easy of execution and more certain than neurotomy.

M. Desprès thought that the operation was not advisable. He thought the section of the nerves supplying the eye was not a rational mode of treatment; he had always opened the eye freely, and provoked suppuration. The results of such treatment were excellent, and a useful stump was left for the adaptation of an artificial eye.

M. Terrier stated that the operation advocated by M. Desprès had justly been abandoned, because it was liable to cause the very trouble for the prevention of which it was practised. He disapproved also of the division of the ciliary nerves, giving the same reasons previously mentioned by M. Giraud-Teulon, with this additional one, that the cicatrix, formed when the external rectus was divided, and subsequently re-united, was liable to set up a severe irritation by pressure.

[This objection loses its force when it is mentioned how frequently the recti muscles are divided without such a result.—*Translator.*]

M. Perrin also disapproved of neurotomy, although he thought the manual difficulties of the operation had been exaggerated by M. Giraud-Teulon.

M. Verneuil stated that he had previously mentioned all these objections to M. Redard. He said also that sulphate of quinia had prevented sympathetic ophthalmia in his hands;

but that M. Trelat justly remarked that these cases were probably neuralgic.

[In spite of the adverse criticisms of some French surgeons, Dr. Chisolm's cases have been so successful, that the great value of the operation no longer admits of a doubt.—*Translator.*]

The Treatment of Articular Rheumatism with Ammoniac.—By Dr. Wasylewski, of Krokan. (*Allg. Med. Central. Zeitung*, 1879, No. 71.) This paper, which seems to be based on accurate and careful observation, seems worthy of careful examination.

Dr. Wasylewski states that ammoniac has been used for the past two years in the Lazarus Hospital for articular rheumatism. The investigations are especially interesting, also, because the writer compares his own results, after the use of this drug, with those obtained by Reisch, in Copenhagen, where salicylate of soda was used.

The number of patients treated with ammoniac was seventy-seven. Of these, forty were men, and thirty-seven women. With one exception, all were between twenty or thirty years of age. All attributed their sickness either to cold or living in damp dwellings. Sixty-three cases were treated with ammoniac alone. Of these sixty-three cases, thirty-four were accompanied by fever; and in twenty-nine cases, there was no rise of temperature. In the thirty-four febrile cases, the main duration of the fever was 6.90 days. The greatest elevation of temperature was 40.5° centigrade. The average duration of the disease in the febrile cases was 31.32 days; in those free from fever, 20.70 days. The duration of the fever was calculated from the time of entrance into the hospital, and the total duration of the disease from the time of admission to the time of discharge. Four patients were discharged unimproved, after being subjected to treatment with ammoniac, salicylic acid, iodide of potassium and baths. One patient died who was taken with acute tuberculosis during the stage of improvement.

Of the sixty-three cases, heart complications occurred in only five. Of these, two suffered from pericarditis; two from both peri- and endo-carditis, and one from insufficiency of the mitral valves. In three of these cases, the heart trouble was present at the time of admission into the hospital. In five patients, relapses occurred after a short time.

During the treatment, the swelling and pain left all the joints, to return to them again, or else to disappear from all but one. It was found, however, that with the disappearance

of the fever in the febrile cases, the swelling diminished very much or disappeared entirely.

When the results under this mode of treatment are compared with those of Reisch, where salicylic acid was used, we find the ammoniac treatment apparently a little more successful.

Sixty-three cases were treated with ammoniac. Reisch has reported eighty-eight treated with salicylic acid. The main duration of the fever in the first series of cases was 6.90 days; in the second series 6.22. The average duration of treatment in the first—both febrile and non-febrile cases being included—was 26.01 days; in the second 35.82 days. Of the first series of cases, the heart was involved in 7.9 per cent; of the second series, in 12.5 per cent. Relapses were also far less common when ammoniac was used, than when reliance was placed on salicylic acid.

[The cases reported by Reisch did not show nearly so favorable results as have been generally obtained in acute rheumatism by salicylic acid; but he does not mention in the paper to which I have had access, what proportion of his cases were *acute*. In the chronic form, salicylic acid is not nearly so efficacious.—W. C. D.]

From Spanish and French. By CHAS. R. CULLEN, M. D. (P. O. Richmond, Va.), Henrico Co., Va.

Menstrual Precocity.—Dr. Stoeten refers to a German girl, born 15th of May, 1871. Six months after birth, the child had grown very much, and its breast commenced swelling and growing. At one year of age, the mother noticed a menstrual flow, which continued regularly every month and lasted three days. At five years of age, the flow was absent one month. At eight years of age, the girl was very robust—her weight being ninety-two and a half pounds, and the circumference around the body twenty-five inches. The genital organs were fully developed, like those of a grown person. The twin sister presented no peculiarity from any other girl of her age. The parents are not remarkable for anything except in the number of their children—the mother being forty years of age, and has had eleven sons and two daughters—three sons at one birth, two daughters at another, and the rest single births.—*Revista de Medicina*, Madrid, No. 75.

Another Case.—The child was born September 7th, 1877, in Valencia, Spain. At two months of age, the mother had

a leucorrhœal discharge, which was noticed also in the child, followed by enlargement of the breasts. At seven months of age, the child had a menstrual discharge, which reappeared each month and was preceded by a leucorrhœal flow; the menstrual discharge lasted three days. At the same time, the breasts continued growing as well as the private parts of the child—particularly its mons veneris and the labiæ. With these changes, the voice changed also, especially in crying, to that of a girl of many years of age. At twenty months of age, this child presented the appearance of a lymphatic, sanguineous temperament, and of a robust constitution. Nothing unusual appeared in the digestive functions, and she continued growing fast. At this age the weight of the body was 15 kilogrammes (about $33\frac{3}{4}$ pounds); length of body 86 centimetres (about 29 inches); circumference of thorax about 56 centimetres; circumference of pelvis about 53 centimetres; circumference of the head about 49 centimetres.

The child walks without support, and appears, in voice and action, as well as in the size of her breasts and private parts, as any girl of from 16 to 18 years of age.—*Revista de Buenos Ayres.*

[*Note by Translator.*—A singular specimen of fatness in a child has been seen by hundreds of people in Hanover Co., Va. Nothing appears unusual in the size of its parents. In fact, its father is smaller than the usual average of men. At six months of age, the child weighed 32 pounds; at $3\frac{1}{2}$ years, it weighed 76 pounds; at 4 years, it weighed 116; and at 4 years and 9 months, it weighed nearly 150 pounds. At this time, its breathing became very difficult, and when lying down would appear to be suffocating. On the 31st January, 1880, the father came after me to attend the child, and before he returned it had died from over-accumulation of fat around its heart—as I foretold the parents that the child could not possibly live. At no time of its life could it stand on its feet, the weight of its flesh being too great for the bones of its legs. The private parts did not differ from those of children of the same age.]

Death from Uterine Injection.—Bruntzel reports a sudden death on the second day after two uterine injections with a weak solution of phenic acid. The autopsy indicated only negative results—no formation of thrombi, no embolism, no sign of entrance of air into the peritoneum, no introduction of water in the veins. The only thing visible was the engorgement of the uterine walls with water. Deaths from this cause should cause great care in the resort to intra-

uterine injections; and only in cases of retention of the secundines (because of the facility with which they conduce to septic poisoning, gangrenous and traumatic endometritis) and in operations.—*Ibid.*

Dental Instruments Transmitting Syphilis.—A middle-aged lady called on us for the treatment of several ulcers on the tongue and palate, and for severe pains extending from the mouth down the neck to the body. She said that a dentist had plugged a tooth with an instrument containing blood, which had just been drawn from the mouth of a youth. The woman had syphilis, was treated for it, and recovered. It is unquestionable that the dental instrument had been the innocent medium of inoculating the lady with syphilitic virus. How many innocent children are no less victims of dental carelessness and filth?—*Ibid.*

[It would be a very nice question of law to decide whether the eruption was syphilitic, and also whether it was transmitted by the dental instrument.—*Translator.*]

Ipecac in Parturition.—Dr. Carriger employs ipecac, for its speedy action in hæmorrhage, during and after parturition. He says it is a powerful drug in stimulating a weak labor, and in relaxing rigidity. It also hastens labor by increasing the pains. A long labor has been speedily terminated by giving from 10 to 20 centigrammes (15 to 30 grains) of powdered ipecac.—*Revue de Sciences Médicales.*

Benzoate of Soda in Diphtheria.—From the experiments of Broun, Dr. Bogust commenced, in Moscow, with this treatment, but adding hydrate of chloral to each dose, and also applying the remedy locally. The only inconveniences were the taste and smell of the medicine; sometimes also nausea and vomiting followed. In these cases, the medicine was administered per enemata, and with as good results.

Dr. Malsinevich also used the same remedies with similar results—immediate cessation of the fever and swelling, and removal of false membrane, and cure in three days.—*Ibid.*, No. 78.

Treatment of Urticaria by Atropine.—Dr. Schimmer reports three cases not curable by any medicine employed which yielded to this treatment. Dr. Schimmer believes that atropine acts through the nerves, and particularly on the great sympathetic.

Enteritis and General Paralysis Treated by Atropine.—Dr. Moreau, of Tours, employed this drug successfully in chronic enteritis, and also in a case of general paralysis.

Petroleum in Pulmonary Complaints.—In the Academy of

Medicine of Rome, Italy, Dr. Galassi, the President, read an interesting article on the action of petroleum on the air passages. In 1871, he had observed the benefit of inhaling kerosene in two of his own children suffering with whooping cough. The disease was completely cured in seven or eight days. The kerosene was respired three hours each day. He referred to a servant who suffered with continued colds and persistent catarrhs, but who, by inhaling kerosene oil, while cleaning a large number of lamps, was cured. He had, from his experience, great faith in the reports of Dr. Boucher, who had written on the subject, and who stated that a refiner of petroleum, and many of his workmen, suffering with pulmonary complaints, had become entirely well, robust and vigorous. As to its cure of phthisis, time only can tell whether petroleum will avail or not.—*Journal d'Hygiène*.

Proceedings of Societies.

Baltimore Academy of Medicine.

Early Application of Forceps in Tedious Labors.—Dr. P. C. Williams read a very practical paper upon the advantages of the early application of the forceps in tedious labors, based upon a large experience. He advocated the early application both for the safety of the mother and the child. In forty-five cases of tedious labor—some of which offered great difficulties—he succeeded in every case in saving the life of the mother, and in only two cases was the child lost. He applies the forceps at the superior straight in all cases in which the size of the head is not readily moulded into the excavation. That the child's head is diminished in size by forceps-pressure, he has evidence in the gradual approach of the handles which correspond necessarily with the corresponding approach of the blades with the compressible foetal head between them. He does not endorse the more modern method of removing the instrument when the head is brought to the vulval opening, but continues the use of the forceps till the delivery of the head, as the best means of protecting the perineum from laceration. In this respect, he has been particularly fortunate. In rare cases, in which he fears that the perineum would yield, he has nipped on the side of the raphe with a scissors, and has in this way removed the imminent danger of laceration. He prefers the forceps in all cases to version; and when they fail, he considers their previous ap-

plication as a good preparation for the version which may then be tried.

Dr. John Morris reported his experiences with the forceps in which the perineum gave way in spite of all due care.

Dr. H. P. C. Wilson endorsed Dr. Williams' views in relation to the early use of the forceps in tedious labors when the head cannot engage at the superior straight. He thought that the forceps should always be applied before the mother has been exhausted by long continued but useless efforts at expulsion; and he further remarked that, with a well dilated os, and the fingers in the os as a guide, no harm could come from the forceps application. Now and then the child may have its face or neck excoriated, and even temporary paralysis may be occasioned by the forceps pressure. In two cases delivered by Dr. Morris last week, one child had paralysis, and the other convulsions, as the immediate result of the severe and long continued pressure of the head in instrumental delivery.

Dr. R. McSherry had always preferred the forceps to version, believing that it was easier to deliver by the head than to empty the uterus of all but the head.

Epithelioma of Uterus Removed with Écraseur—Peritoneum Opened—Recovery.—Dr. H. P. C. Wilson reported an accident which he had in the removal of a very large epithelioma of the neck of the uterus. The mass had filled up the upper half of the vagina, and seemed to be a good case for the use of the *écraseur*. He applied it with all due care, but was shocked to find that in cutting through the pedicle the chain had in some way tucked in the posterior vaginal wall, and had cut its way into the peritoneal cavity through Douglas' space. After completing the removal of the pedicle with the thermo-cautery, he closed the vaginal peritoneal wound with silver sutures. Fortunately, no bad symptom occurred, and the case steadily convalesced as if no accident had happened. The result was in accordance with Dr. Wilson's views, that the *écraseur* was a dangerous instrument for the removal of cancerous necks, and that the thermo-cautery can be substituted in all such cases with very great advantage.

Aortic Aneurism—Peculiar Symptoms—Death—Autopsy—Dr. L. McL. Tiffany reported an autopsy of an aortic aneurism in a man of forty-five, who had for some months suffered with sudden congestions of the head, swelling of lids, blueness of face, coming on from exertion, and from which he had learned to obtain relief by throwing himself upon the bed and allowing his head to hang over the edge. When called

in consultation, he had examined the thorax most carefully. The only symptom of thoracic trouble was some slight dullness on the right side, two inches above the nipple. Respiratory murmurs were perfect on each side, and no abnormal sounds could be discovered. The patient suffered no pain in his chest or back. The diagnosis, based on the slight dullness on percussion and the paroxysmal face-congestion, was aneurism of the aorta near its origin, with the swelling looking backwards. The absence of cough indicated the enlargement before the giving off of any of its branches. The patient was put to bed upon the most abstemious diet, and kept under the effects of *veratrum viride*. For five days he felt himself much relieved, when an abdominal complication occurred which carried him off in forty-eight hours. The autopsy revealed a small aneurismal pouch at the beginning of the aorta, and which had developed within the pericardial cavity, proving the accuracy of the diagnosis.

Hysterical Amblyopia.—Dr. J. J. Chisolm reported a case of hysterical amblyopia in a young lady, age 23, in which the blindness was feigned, and described the method of detecting the deception. The young lady reported the right eye injured by a fall from a horse nine years before, and that the sight in this eye had been defective. Four months since, she had a severe attack of gastric fever with vomiting of blood. When she was recovering from this tedious disease, she discovered that the right eye had become so dim that only light could be discerned. For this condition, she was actively treated with all the most approved remedies with no benefit, and it was only when the other eye was becoming weak that she came under his observation. Dr. Chisolm noticed the right pupil enlarged, which condition she reported as of long continuance. She said that she could see the shadow of the hand, but could not count the fingers with the eye. With the left eye she read well. From her manner, and from the absence of all pathological appearances by ophthalmoscopic examination, Dr. Chisolm suspected feigned disease, although there was no appreciable cause for the deception. To prove his suspicions, he used a stereoscopic examination, by which means he made her see clearly what strictly belonged to the picture before the right eye, and which the left eye could not see for the partition in the stereoscopic box. He afterwards learned that the young lady was very hysterical.

New Method of Performing Optico-Ciliary Neurotomy.—Dr. J. J. Chisolm also reported an easier method of performing the operation of optic nerve and ciliary nerve neurotomy

than that previously described. In his last case of nerve-section, as a substitute for enucleation of the eye-ball, he made an incision horizontally from the edge of the cornea to the caruncula—just such as he would make for correcting the squint deformity. He found that the opening gave him all the room needful for introducing the heavily curved scissors to the posterior axis of the eyeball, and dividing all of the nerves and vessels which enter the eye at its back. As the internal rectus muscle was not disturbed, the operation was very expeditiously performed, and the wound needed no suture.

Analyses, Selections, etc.

Paracentesis of the Pericardium with a Hypodermic Syringe.

F. Peyre Porcher, M. D., Professor of Materia Medica and Therapeutics, Medical College of the State of South Carolina; one of the Physicians to City Hospital, Charleston, etc., contributes to the *Louisville Medical News*, February 7, 1880, the following short paper, which we regard as of such practical use that we copy it almost in full.

Having published (*New York Medical Record*, July, 1878) an operation of this character in which the patient survived several months, I am enabled to record another in which the relief given, though partial, was decided, in the opinion of those who were conversant with the case.

Mary Baker, aged seventy, entered the City Hospital, October 6, 1879, with anasarca—the arms, legs, and face being particularly swollen—and with great oppression of breathing. She was partially paralyzed after a previous attack of hepatic dropsy. The cardiac dullness occupied an area of three inches in diameter, to the left of the sternum, over the fifth and sixth ribs. The heart-sounds were feeble, the pulse likewise, and the attacks of oppression were occasionally so violent as to threaten instant death. Her urine was not albuminous when subjected to either heat or nitric acid. The only treatment was tincture of digitalis and dialysed iron, which was continued up to the date of this writing (*November 12th*).

Oct. 15th.—Assisted by my friend Dr. Wannamaker, one of the house-physicians, the needle of the hypodermic syringe was entered over the centre of the area of cardiac dullness, about half an inch to the right of, and a little above the nip-

ple, and two drachms of fluid were drawn from the pericardial sac. The needle was inserted to the depth of about two inches.

Oct. 16th.—I repeated before the class in attendance the application of the hypodermic needle preliminary to the intended use of the larger needle of the aspirator, but without success, some drops of blood only appearing in the tube of the instrument. The needle was for the third time introduced at a point slightly removed from the first, but with no better result.

The effect of this comparatively slight withdrawal of fluid from the sac, as above related, was in every respect favorable; and this confirms similar reports published in the valuable and unique monograph by Dr. S. B. Roberts, of Philadelphia, to whose kindness I am indebted for a copy of the volume. The woman could afterward take any position in her bed or upon a chair she desired; her condition remained far more favorable than before the operation, and her dropsical symptoms were for a time materially improved. The relief following the removal of so little of the contents of the sac is accounted for (see Dr. Roberts' monograph) by the supposition that internal drainage into the cavity of the thorax occurs through the wound made by the needle, with possibly subsequent absorption. This may explain the unsucccess of my second and third efforts. On *November 12th*, a return of the difficulty of breathing occurred, which terminated her life, while she was under the care of Prof. J. P. Chazal, who succeeded me in charge of the wards.

Autopsy—*Nov. 13th*—This was made by Prof. Chazal, the notes being taken by myself. Anasarca marked; the legs very much swollen; some fluid (several ounces) was found in the pericardial sac, and also in the cavity of the abdomen (a pint or more). There was a large collection of sero-albuminous fluid (one to two quarts) in the right cavity of the chest, which had been indicated by dullness during life. This caused marked atrophy of the right lung—there being no visible air-cells in it. It was dark, dry, congested, and very much collapsed, and, as I have often noticed in such cases, pressed back on the spinal column. The left lung was oedematous—also small and tough from compression of the air-cells. Some hypertrophy of the heart existed, this organ being moved to the left, near the axillary line, by the fluid in the right thoracic cavity. The left ventricle was enlarged and its walls thickened; no valvular lesions existed. There was very little blood in the heart or its appendages, as is

usual where large collections of serous or albuminous exudations are found in the body. The spleen was hard and atrophied, and unusually small—not more than one and a half by two and a half inches. In numerous *post mortems* made during many years' service in hospitals here, and those observed during a course on pathological anatomy at La Charité, I have never met with but one spleen smaller than this one. The liver, enlarged and of normal color, reached to the fourth intercostal space, and was very tough and hard. The left kidney was small, but normal in color, and healthy, save some sclerosis of a portion of it.

The suggestion made in the report of my first case I think an important one. This is to enter the point of the needle under the skin with the piston *down*, then to withdraw the piston as the needle is pushed further in search of the fluid, so that when the fluid is reached it will rush up into the body of the instrument to fill the vacuum. This procedure, by immediately disclosing the success of the effort, will diminish the risks of the operation.

With regard to the best point for the introduction of the needle, we should prefer to select the centre of dullness—being less regardful of the anatomical relations of the parts; for, as in this case, the heart may be displaced from its normal position. Dr. Roberts discusses all of these questions in his record of the sixty cases so far operated on; and he furnishes the arguments *pro* and *con* urged by the different authorities with regard to the best points for inserting the needle—whether that of the hypodermic syringe or the aspirator be used. He cites one case where the heart itself was penetrated and blood drawn from it, followed apparently by no material damage to the individual.

The mere withdrawing of fluid from the pericardial sac is not a difficult operation. My own repeated experience with the hypodermic needle (used as a suction instrument) and the aspirator, in paracentesis of the thorax, for the removal of fluids from the knee-joint, the peritoneal cavity, in the cellular tissues, and in hydrocele,* has taught me, as it has others, that such *fine* instruments can be introduced, with little or no injury, into almost any portion of the body. The real difficulty consists in a correct diagnosis of the cases. It requires a minute familiarity with what may be called the refinements in auscultation and percussion—so as to recognize with certainty the presence and amount of fluid, the absence

*Employment of Suction Apparatus in Medicine and Surgery. *North Carolina Medical Journal*. June, 1873.

of hypertrophy or of dilatation of the heart, the relative position of this organ and the lungs in health, or as modified by pathological processes, and the symptoms which indicate these latter. In a word, it requires the experience obtained by long practice, that knowledge of regional and pathological anatomy which is acquired in the dead-house, by constant study at the bedside and of works like *Sibson's Illustrations*, which exhibit the human body to the student and to the physician, section by section—as if it had been frozen and sliced for this purpose, layer by layer, at different depths from the surface.

To Make an Ocular Inspection of Os Uteri without a Speculum.

O. E. Herrick, M. D., of Greenville, Mich., in the January number, 1880, of *The Medical Summary*, describes a method not generally thought of. He says: Put the patient in Sims' position, and with the two front fingers of the right hand retract the posterior vaginal walls exactly as with Sims' speculum, when a good view of the os can be obtained; oftentimes one wishes to make a specular examination when he does not have his speculum with him; under such circumstances the fingers will many times answer every purpose—the air enters the vagina and distends it just the same as when a Sims' speculum is used. In this way the posterior wall of the vagina is retracted somewhat, which brings the os uteri considerably nearer the vulva than it otherwise would be, and if the posterior wall was *not* retracted, it would still be more accessible from behind; this is easily seen when one remembers that the direction of the vagina is *upward* and *backward*. With a woman upon her back, her os uteri is more inaccessible than in any other position she could get into; and yet that is the position almost always chosen for both digital and ocular examinations. Many men who have practised medicine thirty or forty years, still put their patients upon their backs to examine them; indeed I do not remember to have seen over three or four men who are in the habit of practising the other method. Whoever tries this way will never return to the other. Students are almost invariably taught to place patients upon their backs, or sides, and make examinations from the front, and not one in a dozen *ever reaches the os* until after they have been long in practice. They should be taught to make it the other way, and then they would know what it was like before they got into practice, and would immediately recognize it by the touch.

Ethyl Bromide—the New Anæsthetic—first brought prominently to professional notice by Prof. Laurence Turnbull, M. D., of Philadelphia, Pa.,—has now been subjected to many experimental tests, and stands approved. “In no case as yet,” says Dr. Geo. F. Sowers, of Philadelphia, Pa., (in the *Medical and Surgical Reporter*, Jan. 31, 1880), “have dangerous symptoms presented themselves. Its action, while more prompt, is no more dangerous than that of ether, and while anæsthesia is as profound under its influence as that of either ether or chloroform, it is much more evanescent—patients perfectly anæsthetized being able, in from two to four minutes after its withdrawal, to walk or perform any motion requiring co-ordination. Another advantage of this agent is the small amount required to produce anæsthesia; two drachms will, in from one to three minutes, produce an anæsthesia as profound as an ounce of ether. Its cost is, of course, a consideration; at present the bromide is worth about forty cents an ounce, but when we take the relative quantities of other anæsthetics required to produce anæsthesia, the expense is not any greater, if as great. Under its influence any class of operations may be performed; major and minor operations are alike painless. Further, there is not present that depressing influence so often found in the use of ether and chloroform, nor is the desire to vomit present after its use, though occasionally there is slight, but not marked, nausea. I have the history of a number of cases operated on under the influence of the bromide, in which its physiological effects were studied; nearly all the cases were patients at the Pennsylvania Hospital, and a study of the notes taken will, perhaps, be interesting.”

The first case in which this anæsthetic was employed was one of amputation of the thigh. Eleven drachms were used in the forty minutes which it took to perform the operation. Anæsthesia was produced in one minute; no bad after symptoms were exhibited.

In the next case, removal of cataract in a child, complete anæsthesia, with snoring, was produced in one minute, by one drachm of the bromide; in three minutes, on account of returning consciousness, this amount was repeated. No nausea or vomiting followed.

In the next case, a man had a fracture of the tibia. Previous to the administration of the bromide the pulse beat 80 strokes to the minute; under the anæsthetic it rose steadily to 85 and then to 90. Two drachms were first administered; in one minute the patient talked and cried out, very much

in the manner of one under the influence of ether. In one and a half minutes this excitement had subsided, and in two minutes the patient was snoring and thoroughly relaxed. The examination and dressing of the patient's fracture occupied ten minutes, and in this time four drachms of the bromide were used; the pupils remained normal during this period, face slightly flushed, skin warm. Two minutes from the time of withdrawal of the bromide the man was perfectly conscious; slight nausea but no vomiting supervened.

The effects of the anæsthetic in the next case were not, unfortunately, very fully studied. The operation was that of external perineal urethrotomy. In this case, however, the diaphoresis, which would seem to be one of the characteristic symptoms in anæsthesia from the bromide, was first noticed; in the first stage of anæsthesia the pupils became widely dilated, and the patient perspired profusely; the pupils after a time became contracted, but the sweating remained as a marked feature.

The next case was that of a girl, who in early life had lost her arm. A spicula of bone extruding from the stump now required removal. Two drachms of the bromide were administered to her at 11.31 A. M.; at 11.32 patient quiet; 11.33 patient talking, but no struggles; 11.34 anæsthesia complete, and another drachm administered; pulse not depressed, respiration unaffected; 11.36 patient snoring; 11.38 patient conscious; some sweating, but not marked.

The next case was one in which it was necessary to remove three of the toes and some of the metatarsal bones. The pulse before the operation marked 132, and excited; respirations 27. At 11.26 two drachms were administered; at 11.28 another drachm; patient snoring at 11.29, at which time the operation, lasting till 11.31, took place; at 11.30 another drachm; pulse 120, respirations 24; patient sweating profusely, and face congested or flushed; at 11.34 patient woke; pulse 104; thus in eight minutes from the administration of the first drachm the patient was perfectly conscious.

A boy suffering with paraphimosis became the next bromide subject. Anæsthesia took place in one and a half minutes in this case. The first drachm was administered at 11.52 A. M.; at 11.53 patient was snoring; at 11.53½ the second drachm was administered; the pulse, which before the operation beat 105, now beat 120, respirations 22; at 11.55 another drachm; respirations little rapid, and 24 to the minute; at 12 M. patient conscious. No after symptoms.

The next case was one in which it was necessary to search for a bullet supposed to be imbedded in the forearm. Six drachms were employed, one drachm being administered every two minutes; pulse before anaesthesia 105; respirations 32. First two drachms administered at 11.31 A. M.; at 11.34 face flushed, patient excited, and another drachm administered; at 11.35 pupils dilated and patient snoring; pulse 112, respirations 32; at 11.36 another drachm given; 11.38 another drachm; at 11.39 profuse diaphoresis; at 11.40 another drachm; at 11.41 patient snoring, pupils contracted, pulse 96, and stronger; 11.42 another drachm; at 11.44 the Esmarch bandage was removed; at 11.47 patient conscious.

Amputation of the second joint of the little finger was the next case upon which the bromide was employed. In this case more resistance was offered to the effect of the anaesthetic than in any case thus far experimented upon, though it is but fair to add that the patient was given to alcoholism. Pulse before anaesthesia 120; respirations 24. At 11.49 two drachms administered; at 11.51 one drachm administered; face flushed, pupils dilated, patient excited; at 11.52 patient snoring, and pupils widely dilated; at 11.53 another drachm; at 11.55 anaesthetic withdrawn; and at 11.57 patient conscious, and walked out of the arena without assistance.

The next operation in which the bromide was employed was that for the relief of anal fistula. Pulse before administration of anaesthetic 150; respirations 28. At 12 M. two drachms were administered; at 12.03 pupils dilated and patient somewhat excited, and another drachm administered; at 12.05 another drachm given: patient quiet; at 12.06 anaesthetic withdrawn; and at 12.07 patient conscious.

The next subject upon whom the bromide was used was a boy suffering with phimosis. Pulse before anaesthesia 96; respirations 24. Two drachms administered at 12.11; at 12.13 another drachm given; face flushed and sweating present, at 12.15 another drachm; at 12.16 another drachm; 12.17 patient snoring, pupils dilated, profuse diaphoresis; at 12.18 bromide withdrawn; at 12.20 patient conscious, and walked out of the room without assistance.

The next use made of this anaesthetic was in the examination and setting of a fractured thigh. Neither pulse nor respiration was affected. Two drachms were administered at 11.15; at 11.17 patient unconscious, and another drachm administered; at 11.19 another drachm; at 11.20 anaesthetic withdrawn; and at 11.21 patient conscious.

In the next case it was necessary to incise the periosteum;

the bromide was employed. At 11.49, pulse being 110, respirations 32, the usual quantity of two drachms was administered; at 11.50 the face flushed, pupils slightly dilated; at 11.51 another drachm; at 11.52 bromide withdrawn; and at 11.53 patient able to dress himself and walk out.

In the next case a cancerous growth was removed from the roof of the mouth. Pulse before anæsthesia 88; respirations 27. Three drachms were employed, the patient being under the influence of the drug for four minutes. It took three and a half minutes to fully anæsthetize him, and one and a half minutes for him to recover consciousness after the withdrawal of the bromide.

The last case was one in which it was necessary to employ the actual cautery, on account of synovitis of the knee-joint, the patient being a boy about 17 years of age. The pulse before operation beat 120; respirations 28; two drachms administered at 12.53; at 12.54 pupils slightly dilated; at 12.55 another drachm given; pupils more markedly dilated; at 12.57 patient perfectly relaxed, and unconscious, sweating slightly, face flushed; at 12.58 another drachm; patient now in profuse diaphoresis, and pupils widely dilated; at 1 P. M., 5ss administered; pulse 120; respirations 20 and slower; at 1.02 P. M. patient perfectly conscious.

It will thus be seen that bromide of ethyl presents the great advantage of safety (so far as any anæsthetics are safe), rapidity of action, smallness of quantity required to produce anæsthesia, but little effect on the respiration and circulation, and a rapid passing away of anæsthesia. Further, its odor is not unpleasant, those standing three feet from the point at which it is being administered not being able to detect it; but it is not so agreeable to the patient as chloroform, nor is it so depressing. It is not inflammable (and it is, in fact, said to put out fire), thus presenting an advantage for night use.

One should understand, however, how best to administer it. A small napkin should be folded and pinned to a folded towel that covers the patient's face; on the napkin two *measured* drachms of the bromide should be poured, and the patient directed to take long, deep inspirations, or, what is better, prolonged and forced expirations; in two minutes from the time of administration of the first two drachms a second drachm should be given, and this should be repeated at intervals of two minutes. Thus far each drachm has been measured, and it would, no doubt, be economy to follow this plan altogether in the administration of the bromide; waste

is thus avoided, and the effects of the drug can better be studied.

"It would seem that the bromide of ethyl is one of the long desired boons of medicine; to the country practitioner it presents a vehicle potent in small quantities, not making it necessary for him to carry a quart bottle to each operation he may be called on to perform, a half-pound bottle of the bromide answering for many operations; to the city practitioner it presents the advantage of not filling his office or the house of the patient with an odor that is not only unpleasant to many, but which lasts for such a length of time as ether does. I have been told by a gentleman (practising in the country) who has employed this new agent, that he can now perform an operation in his office, and have his patient leave in from ten to fifteen minutes from the withdrawal of the bromide, while when ether is administered, he must remain three or four hours until the effects of the ether, the nausea, vomiting, etc., have, in some measure, passed off. If time is money, surely we save with this agent both time and money."

Dr. R. J. Lévis, of Philadelphia, we are told in the *Cincinnati Lancet and Clinic*, Feb. 14, 1880, has administered bromide of ethyl to upwards of sixty patients, and finds it safer than chloroform and more agreeable than ether.

Bromide of ethyl (or hydrobromic ether, as it is sometimes called) is a colorless, very volatile liquid, of a sweetish and warm taste; specific gravity 1.419 at 59°F.; boils at about 106°F. It was discovered in 1827, and first used by Nunely, of Leeds, in 1849, on animals. In 1865, he used it upon patients in the Leeds General Hospital.

The *National Dispensary* (2d edition, page 114) gives the formulæ for its preparation. One, in brief, consists in the action of ice cold alcohol upon amorphous phosphorus, when bromine is dropped into the retort, with the precaution of avoiding too great elevation of temperature. Let the mixture stand 24 hours, and then distill. "The distillate is washed with water, and if acid, with a little alkali; and finally rectified over chloride of calcium. Dr. W. H. Greene (1879) found the following process to work satisfactorily: 12 parts of coarsely powdered potassium bromide, and 11 parts of sulphuric acid diluted with its bulk of water, are heated in a flask; when hydrobromic acid begins to be disengaged, 12 parts of alcohol are allowed to flow in slowly; the distillate requires washing with water and alkaline carbonate before rectification."

"If a lighted match be placed in ethyl bromide, the flame

is extinguished. This is said to be a test as to the purity of the article." (*Cincinnati Lancet and Clinic.*)

"It is said to occasion a prickling of the skin at the elbows and in the hands, with a rapid loss of power to move." *National Dispensatory.*

[A great number of instances besides those above referred to are recorded in our exchanges in which this bromide of ethyl has been used as an anæsthetic, and as yet we find no record of death from it, nor, in fact, any very serious symptoms. It is probable it will supplant the use of ether and chloroform in a great degree. *Editor Va. Medical Monthly.*]

An Ossified Pregnant Uterus.—Dr. John T. Williams, Professor of Anatomy in the Hospital College of Medicine, in Louisville, Ky., reports a singular case in the February number, 1880, of the *Medical Herald*. The specimen—a tumor—was taken from one of the dissecting subjects, a negro woman who was probably between 60 and 70 years of age. When she was placed upon the dissecting table, the Professor noticed a bulging in the lower portion of the abdomen. When the other dissections were finished, the abdomen was opened, and a tumor was found occupying the lower zone of that cavity, to the left of the median line, and extending deep down into the pelvis. It was surrounded by a quantity of loose material, in which were from fifteen to twenty fibroids, varying in size from a guinea's egg to a pea. The mass was attached very slightly to the walls of the pelvis by cellular tissue and fascia. It was freely movable in all directions; but in order to remove it, I had to use the knife in the pelvis, without knowing exactly what I was cutting. When removed, the tumor was found to be of very hard material, shaped exactly like a large pear—the small end looking down. It measured eighteen inches over the ends, sixteen inches around the largest part of the body, and five inches around the small extremity. With considerable difficulty, the Doctor succeeded in tearing open the mass in its long diameter, and found that it contained a perfectly formed and well preserved child apparently at full term. But owing to the firm union between the fœtus and the inner surface of the case, it was impossible to separate the two without tearing both to pieces.

Prof. Williams, with two members of the class, then carefully examined to find the position of the uterus, but failed to find the organ; but they then found that the cut made to liberate the tumor from the pelvic cavity had made a large

hole in the upper part of the vagina. Prof. Marvin, Mr. Flexnor and Prof. Williams have examined, with the microscope, pieces of the pear-shaped case, and find that it is bone. The shape of this bony envelope, its contents, its position in the pelvis, and its relation to the vagina, the presence of the fibroids, and the failure to find anything else corresponding to a womb, would indicate this to be a case of ossification of the womb.

Mortality of Whites and Negroes.—The Annual Report for 1879, of the Board of Health, of Selma, Ala., with John P. Furniss, M. D., as the worthy Registrar, has come to hand. It illustrates what we have before mentioned as a serious calamity in a politico-economic point of view—namely, the greatly increased ratio of mortality, since the war, among the colored population of the South. Some years ago, the late Dr. Thos. P. Atkinson, then of Danville, Va., contributed to the *Transactions of Medical Society of Virginia* two carefully prepared papers on the subject, especially as relates to Virginia. And since then, we have time and again seen other confirmatory proofs of the conclusions then appended to his paper, namely, that the negroes, since the war, were dying at a more rapid rate than formerly, and that the ratio of mortality among them was greatly in excess of the mortality among the whites.

In regard to the Selma Annual Report, we find that the population, according to the census taken March 1st, 1878, consisted of 3,082 *whites*, and 3,988 *colored*. During 1879, 70 whites died, and 135 blacks. Consumption alone carried off 27 colored. About the same relative ratio of mortality (of nearly two colored deaths to one white) is reported by most boards of health, and by the Surgeon-General United States Army. The colored troops receive the same food, clothing and medical attention, and yet the mortality from sickness is nearly double that of the white troops.

Mistletoe.—Dr. Henry P. Wenzel, of Lomira, Wis., Chairman of the Committee on "New Remedies," etc., makes a most excellent report on his subject in the *Transactions of the Wisconsin State Medical Society*, 1879. Among other things, he speaks of mistletoe. The American species *phoradendron flavescens*, is a parasite which grows on oak, maple, poplar, walnut, cherry, and elm trees. That which grows on the oak is generally preferred, but those plants on *ulmus nemoralis* and on *quercus aquatica*, are reported to possess the most

energetic medicinal properties.* All parts of the plant contain viscin—birdlime. The bark and leaves have an unpleasant odor and a mawkish, bitterish taste. The berries contain viscin, green wax, gum, bassorin, brown extractive, lignin, salts of potassa, lime, magnesia, and oxide of iron, united with vegetable acids. (Henry.)

Medical properties: narcotic, antispasmodic, tonic. Has been used and found beneficial in epilepsy, insanity, paralysis and other nervous diseases.† W. H. Long, M. D., has used it for many years as an oxytotic, and prefers it to ergot, which cannot be given in every stage of labor, in uterine hæmorrhage and metorrhagia.‡ There are less after-pains than after the use of ergot. He uses the infusion of the bark (bark ʒij, water oss., dose, half teacupful) or the tincture.§

We have used a fluid extract prepared by Messrs. Hazard, Caswell & Co., of New York, in parturition, and are satisfied that its *clonic oxytotic action is a desideratum in labor; the pains become more energetic; between the pains there is a respite to the patient; she gathers more strength for the next pain, and labor is expedited; there is no danger to the child. Ergot produces tonic contractions; there is no intermission of pains; no repose to the goaded uterus; no rest to the patient; great danger to the life of the child, and sometimes extensive laceration of the perineum, or rupture of the vagina, uterine neck or body, when the contents of the uterus are shot through the passage like a cannon-ball. We use mistletoe altogether in parturition. We have also used it in post-partum hæmorrhage, two weeks after delivery, with success. The placenta was delivered entire shortly after the birth of the child. What the cause of, and whence the flow of red blood, was difficult to determine. Here, position, warm water and hot water injections, kneading of the uterus, and large doses of ergot, failed.*

Sodium Salicylate in Phthisis.—A. Hutchins, M. D., of Brooklyn, N. Y., in the *Proceedings of the Medical Society of the County of Kings*, February, 1880, says: I desire to call attention to certain useful results to be obtained from sodium salicylate in the advanced stage of phthisis. I am indebted to Dr. B. A. Segur for the original suggestion. The cases in which its effects have been observed are too few, and the effects not sufficiently constant to justify any positive state-

* King's Dispensatory, p. 861; edition 1871.

† l. c.

‡ Louisville Medical News, vol. V, Nos. 11 and 14.

§ Louisville Medical News, vol. V, p. 238.

ments as to the precise indications for its use; yet, so far as have been observed, the effects are pronounced enough to justify further observation. My studies, thus far, have been limited to cases in the Brooklyn City Hospital, while Dr. Segur, in addition to some experience in St. Peter's Hospital, has had some cases in private practice, where its effects have been observed.

Sodium salicylate acts promptly and pleasantly in modifying the colliquative diarrhœa of phthisis. Its action is accompanied by no such contingent or secondary effects as belong to the use of opiates. Of course, no cure of the diarrhœa is expected, and a recurrence of the symptom can be met by resuming the medicine. In connection with this, it has been noticed that the administration of the sodium salicylate has been followed by a marked amelioration of the cough, a subsidence of the hectic, and a diminution, sometimes suppression of the night-sweating. It is not known how far these effects can be prolonged by the continued use of the drug, nor to what extent it may be beneficial to intermit it with other remedies. The most that can be said with positiveness is, that without disturbance to the digestion, it, at times, serves an excellent purpose in modifying, to the great relief of the patient, some of the more prominent and distressing symptoms that belong to the latest stage of phthisis. Ten grains of the drug, repeated every three or four hours, have been found adequate. Dissolved in water, it will not be found offensive if taken in iced-water.

Astounding Mesmeric Power.—A curious case of mesmerism is recorded by the civil surgeon of Hoshungabad, says the *Indian Medical Gazette*. A young woman named Nunnee, aged 24, was married some twelve years ago; she, however, did not go to her husband's house for two years afterwards. After staying with him for eight days, she suddenly became insensible, and remained so for two or three days. She was taken back to her mother, and soon got well. Then follows a very remarkable history. During the next four or five years she never entered her husband's house without falling insensible, and remaining so. He was very kind and attentive to her; she liked him, but whenever he came into her presence she at once sank into this state. This went on till she became emaciated and exhausted, and at last her parents applied to court for a separate maintenance for her. While she was in court the husband entered, and she instantly became insensible, and was carried to the hospital, where the

case was carefully attended to by Dr. Cullen, in March. While in this state her pulse was even, breathing soft, her body pliant, but she could eat nothing. Experiments were carefully made to see if there was no trick about it. While she was in bed, her husband was muffled up, and made to walk through the ward. She said she felt he was near her, and she was by no means well, but had not seen him anywhere about. Next day this experiment was repeated, and she actually became insensible as before. When the husband left the place she recovered. The experiment as to the influence of the husband's presence was tried in all sorts of ways. He was made to pass behind her, and to be near her in a separate ward, but this had no effect, but whenever he was brought to look on her face, though muffled up, or disguised as a policeman, as a Sepoy, etc., she was at once influenced. The experiments continued for about a month, and the conclusion was that the husband unconsciously mesmerized her. The court came to the conclusion that it was impossible she could live with him, and a separate allowance was ordered. The husband was asked to try if he could not remove the effect, seeing that he had the power to cause it, but he was quite frightened at the idea of having the power, and could not control it in any way.—*Exchange*.

Apropos to the above, we find in the *Proceedings of the Louisiana State Medical Association*, 1879, a report of a case illustrating the power of *mesmerism as an anæsthetic in surgical operations*. Dr. E. L. Day, of Hempstead, Texas, reports the case in these words:

"The subject of this article was suggested to me from a case reported by Dr. C. L. Legreud, of Hempstead, in this State, a case in which he amputated the great toe while the patient was under the influence of magnetism, and of which I send you a succinct account, begging the Journal will deliver its opinion of this interesting case.

Willis Francis, colored man, about twenty-five years of age, had his great toe badly injured by having heavy iron rollers fall upon it. About ten days after injury, he consulted Dr. Legreud, who decided to amputate, and as an experiment, called upon Mr. James Armstrong, of this place, who claims the power of magnetization, to exercise this influence on his patient. The magnetizer commenced by passing his hands slowly and steadily in front of the patient's face for a period of five minutes, when he closed his eyes as though in sleep. The doctor then performed the operation, the patient remaining all the while in a state of complete anæsthesia. By sim-

ply snapping his fingers sharply in the patient's face, the influence was removed.

[The above phenomenon is commonly called mesmerism, and is fully described and explained by Dr. W. B. Carpenter, in his work on *Human Physiology*, being entitled by him *Artificial Hypnotism*.—Ed.]

Case of Sudden Death during Injection of the Uterus with Perchloride of Iron.—G. Ernest Herman, M. B., and F. Gordon Brown, M. R. C. S., of London, attended a woman, 24 years old, in her second labor, which was natural. But after the expulsion of the labor, the uterus did not properly contract, and there was free hæmorrhage, which was arrested by grasping the uterus; but to maintain the uterine contraction, Mr. Brown was obliged to keep his hand continually on the uterus. A solution of the perchloride of iron (about one part to six of water) was then injected into the uterus with a Higginson's syringe. At the time of the injection, the patient, although very anæmic, was yet not in apparent immediate danger of death. After the first syringeful or two had been sent up, the patient seemed a little uneasy; but she said the injection did not cause much pain, and the injection was continued. After a few more syringefuls, she gave a faint cry, threw up her arms, turned pale, gasped for breath; the wrist pulse could no longer be felt; a few sighing inspirations followed, and then she was dead. Permission to make an autopsy was refused. Is not a sponge or a swab a safer means of applying the remedy in a recently delivered uterus? *Obstet. Jour. Great Britain and Ireland*, Jan., 1880.

Morphia Tartrate for Hypodermic Use.—This preparation has been recommended by Erskine Stuart as particularly suitable for hypodermic injections, because more concentrated solutions can be obtained of it than of the muriate or acetate. It is made by dissolving 10 grams of crystallized morphia, and 2.5 grams (or sufficient) tartaric acid, in 40 grams hot distilled water, and then evaporating in a moderately warm place. It is very soluble in water and alcohol, and forms neutral, wart-like crystals, consisting of needles.—*Pharm. Centrabl.*, Nov. 20, 1879; *Amer. Jour. Pharm.*, Feb., 1880.

Treatment of Hæmorrhoids.—Dr. Hext M. Perry, West Philadelphia, Pa., in the *Medical Brief*, September, 1879, says that, in the treatment of piles, he gives preference to the use of "Bartlett's Pile Suppositories," manufactured by Messrs.

Henry C. Baker & Co., Philadelphia—the manufacturers of “Baker’s cod-liver oil and phosphate of lime,” etc. He claims that after a long experience with them they give immediate relief.

The next best treatment he has used is that recommended by Dr. Fordyce Barker, of New York, given in his work on *Puerperal Diseases*.

R. Ungt. gablæ comp.....5j.
Ext. opii aquæ.....ʒj.
Liq. ferri sub-sulphat.....5j.

M. Make ointment S. Apply to the tumors and well up the rectum twice daily.

In addition, take one of the following pills, night and morning:

R. Pulv. aloë, Socot.
Sapon, castil... ..aa.....ʒj
Ext. hyoseyam.....5ss.
Pulv. ipecac... ..gr. j.

M. Make twenty pills.

To Remove Plaster-of-Paris from the Hands.—Dr. T. E. Wilcox, A. Surg., U. S. A., says that a little bicarbonate of soda or potassa, added to the water in which the hands are washed after applying plaster-of-Paris bandages, etc., immediately removes the unpleasant feeling left by the plaster.—*Toledo Med. and Surg. Journal*, January, 1880.

Book Notices, &c.

Publishers and Authors having complimentary copies of their publications for distribution, are invited to contribute such as they can spare to the library of the Richmond Academy of Medicine, where they will be brought to the attention of a large body of influential medical men. Dr. E. T. Robinson, Richmond, Va., Librarian, etc.

Theory and Practice of Medicine. By FREDERICK T. ROBERTS, M. D., B. Sc., F. R. C. P., Professor of Materia Medica and Therapeutics at University College; Assistant Physician to Brompton Hospital for Consumption and Diseases of the Chest, etc. With Illustrations. Third American, from the Fourth London Edition. Philadelphia: Lindsay & Blakiston, 1880. 8vo. Pp. 1041. Cloth. Price \$5. (For sale by West, Johnston & Co., Richmond.)

As a text-book, for descriptions of diseases, their pathology and their respective diagnoses, this is, perhaps, the best work that we could recommend to students or practitioners. There

is a comprehensive brevity about the author's style of writing that makes it exceedingly valuable to practitioners, who are seeking to gain information with which to go to the bedside to make their diagnoses. But, strange to say, although the author is a Professor of Materia Medica and Therapeutics, the sections under the headings of the different diseased conditions which relate to treatment are wanting in perfection, according to the advances of the day. For instance, in the treatment of tetanus or lockjaw, not a word of reference is made to the use of chloral and the bromides, which, in this country, have cured so many cases of this formerly almost always fatal disease. True, the author, in the section on treatment, refers to *idiopathic* tetanus, which gets well under almost any anodyne or antispasmodic treatment; but we look as much, if not more, to books on Practice, as to those on Surgery, for the treatment of traumatic tetanus. Then, again, in regard to acute rheumatism, we find Dr. Roberts giving his personal conclusions in regard to salicin, salicylic acid, and salicylate of soda, which, although they do not oppose the use of these agents, speaks of them as follows: "These drugs utterly fail in a good number of cases, and therefore can, by no means, be implicitly relied upon, and certainly do not possess the almost *specific* action in the treatment of acute rheumatism, which has been attributed to them." This statement is so much at variance with the experience of most of the practitioners of large experience in acute rheumatism on this side of the Atlantic, that we would suggest to the reader not to let the recorded unfortunate experience of the author have undue weight in inducing him to use anything in preference to these very agents. After these fail, *then* let him resort to the alkalies, etc. Other instances of insufficient therapeutics might be pointed out; but we will refer to only one other. In the treatment of consumption, regarding which the author—being an Assistant Physician to the world-famed Brompton Hospital for Consumptives—is of course well informed, he yet makes but a mere allusion to the *phosphorous* treatment, which, for the past five years, has been gaining favor in many parts of the world—perhaps more especially in this country. He simply enumerates among "other special agents recommended," the use of "hypophosphites of lime, soda and iron, phosphate of lime, extract of malt." We would not be understood as saying anything against the use of the codliver and other oils, nor against the quinine treatment. On the contrary, general experience confirms the opinion of their utility. But we are

satisfied—not so much from what has been made prominent in the text-books, as from observing the practice of humbly minded physicians, who seek to do good rather than gain professional reputation or renown—that too little value has been attributed to those agents which especially contain animal phosphorus. Extract of malt with phosphorus—not the hypophosphites—is a most useful combination in chronic pulmonary phthisis. We will not undertake here to explain why, in our opinion, animal phosphorus, in its pure state, acts better than the hypophosphites; but such is the fact, according to our experience.

But entering, at this unusual length for us into a notice of these special subjects, is only a manifest of the great interest we have found in the perusal of the book. We have been greatly edified by it; and, we repeat, that in all, except its therapeutics, this work is the best one volume on *Theory and Practice of Medicine* with which we are at all familiar.

In regard to the publishers' part, they have done the mechanical part handsomely; but why they should have divided the one volume into two parts, with a repetition of the paging for each part we do not understand. There should be consecutive paging, in any one book, from the title page to the last page of the index.

A Ministry of Health and Other Addresses. By BENJAMIN WARD RICHARDSON, M. D., F. R. S., LL. D., F. S. A., etc. New York: D. Appleton & Co., 1879. 12mo. Pp. 354. (For sale by Messrs. Woodhouse & Parham, Richmond.)

This new book contains a collection of Addresses, upon a pleasing variety of subjects, delivered by the learned author, on different occasions, at longer or shorter intervals, covering a period of nearly twenty years. There are eight of these Addresses in the book before us; and while all have their value, some of them are of superlative interest. They fall rather into the line of medical literature, than into didactic treatises on the subjects discussed; and cannot fail to interest the cultivated reader in any department of science and literature, as well as the physician. Dr. Richardson is a finished scholar in its wide and comprehensive sense. He wields a ready and facile pen, and invests every topic which he touches with a fascination and a charm. His address on *William Harvey* is replete with instruction, and furnishes a full length portraiture of this world renowned leader in medical discovery and science. His "*Homily Clerico-Medical*," is singularly

pleasant and agreeable, and is a novelty in its line. It was delivered in St. Paul's Cathedral, London, and first published in the *Clergyman's Magazine*. It sets forth in a very striking point of view, the intimate and close relationship between the two leading learned professions. The Address, however, that strikes us as the most popular, versatile and instructive, is styled, "The World of Physic." It is brimfull of thought, and abounds in beautiful and striking moral and practical lessons. The concluding Address on "Ether Drinking, and Extra Alcoholic Intoxication," cannot fail to engage the attention of the medical student. Nor should we omit a reference to the value of his Address on "Vitality, Individual and National."

It is a pleasant relaxation to turn from the standard works in medicine, and spend an hour with such a book as the one under notice. Nor, will anyone be misled or disappointed, who shall invest the small sum of money in the purchase of this new book.—J. E. E.

Photographic Illustrations of Skin Diseases. By GEO. HENRY FOY, A. M., M. D., Clinical Professor of Dermatology, Starling Medical College, Columbus, O., Surgeon to New York Dispensary, Department of Skin and Venereal Diseases, etc. 48 Colored Plates taken from Life. Part 5 and Part 6. New York: E. B. Treat. 1880. Each Part, pp. 8 to 12. Royal Quarto. Pamphlet. Complete in Twelve Parts. Price, \$2 a Part. (From Publisher.)

These Parts 5 and 6 are taken up mostly with eczema in its various phases, ulcer (varicosum), and psoriasis (annulata). Each phase of eczema, as also the other two diseases, is handsomely illustrated by a properly colored plate taken from photographs. The author, as well as the publisher, have admirably succeeded in delineating by text and drawing the several diseased conditions. Such *photographic illustrations* of skin diseases, accompanied by so graphic a text takes the place of a clinic. To practitioners who seek to make accurate diagnoses,, and thus intelligently prescribe, these Parts seem almost invaluable.

A Manual of Prescription Writing. By MATTHEW D. MANN, A. M., M. D., Lecturer on Clinical Microscopy, and Examiner in Materia Medica and Therapeutics, College of Physicians and Surgeons, New York, etc. New York: G. P. Putnam's Sons. 1878. 16mo. Pp. 155. Price 90 cents. (For sale by Messrs. West, Johnston & Co., Richmond.)

This *Manual* contains "a full explanation of the methods of correctly writing prescriptions, a table of doses, expressed

in both the apothecaries, and metric systems, and rules for avoiding incompatibilities, and for combining medicines." The work, while useful to established practitioners, will be found of special value by students and younger practitioners. A great number of writers for medical journals—men who write what is worth recording, too—would benefit themselves and save editors many troubles and blames if they were to consult such a book as this in order to correct their manuscripts.

Infant Feeding, and its Influence on Life. By C. H. F. ROUTH, M. D., M. R. C. P., L. Fellow of University College, etc. New York: Wm. Wood & Co. 1879. 8vo. Pp. 270. Price \$1.50. (By mail from Publisher.)

This is another volume of the now familiar "Wood's Library of Standard Medical Authors." It treats of the causes and prevention of infant mortality. Every page is interesting to the medical reader, since throughout the book entertaining facts are detailed or valuable information imparted. The author takes advantage of his subject also to speak of the medical relationship of the mother to her infant, and to herself; and finally the treatment of those diseases of children following upon insufficient or improper feeding. An appendix contains some important children's mortuary statistics. Any physician who reads this book will be interested, instructed, and will derive many practical suggestions to govern his opinions and therapeutics.

Lectures on Practical Surgery. By H. H. TOLAND, M. D., Professor of the Principles and Practice of Surgery in Medical Department of the University of California. Second Edition. Illustrated. Philadelphia: Lindsay & Blakiston. 1879. 8vo. Pp. 520. (For sale by Messrs. West, Johnston & Co., Richmond.)

Holding the author in the high esteem we do as a practical surgeon and an eminent authority in surgical matters, it occasions regret to be compelled to say that we are surprised that a second edition of these *Lectures* has been called for; and that having the opportunity to present a second edition, he has not improved it by materially improving upon the first edition. What there is of the *Lectures*, is good, to be sure; but they are by no means complete, nor even scarcely systematically arranged. Hence we cannot recommend the volume as a text-book for college students, nor as a guide book to inexperienced graduates in medicine. It is of use almost exclusively to professors and skilled practitioners who

seek diversity of practice rather than the principles of surgery. This edition is simply a reprint of the first, with the addition of a lecture on Diseases of the Rectum, and the report of two cases of Aneurism—one of the left iliac artery; and the other an axillary aneurism.

Biographical Dictionary of Contemporary American Physicians and Surgeons. Edited by WILLIAM B. ATKINSON, M. D., Permanent Secretary American Medical Association, etc. Second Edition, Revised and Enlarged. Philadelphia: D. G. Brinton. 1880. 8vo. Pp. 765. Price—Cloth, \$5; Leather, \$6. (For sale by Messrs. West, Johnston & Co., Richmond.)

Such a work as this is open to remarks of a diverse character—some approving and some condemning. The work is simply a record of facts connected with individual members of the profession in America. The author “confesses to many omissions unavoidable in consequence of the extent of territory embraced, and the hesitancy of some gentlemen to supply information.” The publisher intends to have these omissions “supplied from time to time and incorporated in the book until it shall be a complete account of the activity and research displayed by the regular profession of this generation in this country.” Not only is such a volume as this of future historical importance, but is of great interest to the present generation. It adds greatly to the pleasure of any reading when something is known of the author; and in reference to most of the medical authorities of the country now, some account of their lives may be found in this volume.

We notice with regret the omission from this edition of the many excellent steel-plate engravings that enriched the first edition. But in lieu of this omission, we find the additional biographies of a number of practitioners who were not mentioned in the former edition.

Reports to the St. Louis Medical Society on Yellow Fever.

By W. HUTSON FORD, A. M., M. D., Formerly Professor of Physiology in the New Orleans School of Medicine, and in Charity Hospital Medical College of New Orleans, etc. (Revised by the Committee on Publication—Drs Thomas Kennard, Walter Coles and John Bryson.) St. Louis: Geo. O Rum bold & Co. 1879. 8vo. Cloth. Pp. 327. (From Committee on Publication.)

This Report is presented as the result of a resolution adopted by the St. Louis Medical Society in November, 1878, and has special reference to the terrible epidemic of yellow

fever in 1878 as it prevailed in and near St. Louis. But beyond this, it is a most valuable contribution to the general history of the subject. It contains (1) the Report of the Committee Appointed to Inquire into the Relations of the Epidemic of 1878, in the City of St. Louis; and (2) a Report on the Meteorological Conditions and Etiology of Yellow Fever, and of Certain other Diseases Associated with a High Temperature (such as sunstroke, cholera sporadica, malarial fevers, etc.); and on the Treatment of Yellow Fever. Maps and diagrams are incorporated with the report which materially add to an understanding of the text.

The Mouth and the Teeth. By J. W. WHITE, M. D., D.D.S., Editor of *Dental Cosmos*. Philadelphia: Lindsay & Blakiston. 1879. 16mo. Pp. 150. Cloth. Price, 50 cents. (For sale by Messrs. West, Johnston & Co., Richmond.)

This is the seventh of the popular series of *American Health Primers*, under the excellent editorial management of Dr. W. W. Keen, of Philadelphia. This monograph, written altogether in a style which is intelligible to every cultivated head of a family, contains much useful information that should be known. We wish we could induce our professional friends to assist in popularizing such publications.

Outlines of the Practice of Medicine, with Special Reference to the Prognosis and Treatment of Disease, with Appropriate Formulæ and Illustrations. By SAMUEL FENWICK, M. D., Lecturer on the Principles and Practice of Medicine at the London Hospital Medical College, etc. Philadelphia: Lindsay & Blakiston, 1880. Cloth. 12mo. Pp. 387. Price \$2. (For sale by Messrs. West, Johnston & Co., Richmond.)

The general character of this book is pretty well indicated by the title, as above given. No attempt is made at giving the definition, the history, pathology, physical diagnosis, etc., of diseases—only their prognosis and treatment, in which latter sections (on treatment) the important symptoms are mentioned. Nor is the book complete in its index of diseases, as compared with standard works on the Practice of Medicine. While we cannot say that there is no use for such a book, still it would have been much more useful had it been more complete. It is too much of a syllabus for a text-book on practice; and does not contain enough of the diagnosis of diseases to satisfy the graduate in medicine who is informed as to the therapeutical application of remedies, but who, in

any given case, is seeking to find out what diseased condition he has to deal with. Simply as an appendix to other works on Practice, the design is good; and in this sense the work is useful—especially as a clinical instructor on the application of remedies to symptoms.

A Dictionary of German Terms Used in Medicine. By GEORGE R. CUTTER, M. D., Surgeon to the New York Eye and Ear Infirmary, etc. New York: G. P. Putnam's Sons. 1879. Cloth. 12mo. Pp. 304. Price \$3. (For sale by Messrs. West, Johnston & Co., Richmond.)

The design of this work is excellent, and the present publication is most useful to readers of current medical literature. A second edition, with additions of other words, may be better; but until then, we know of no book published in America that can take the place of this. The definitions, of course, are given in English. An improvement might consist in giving German synonyms, and also in indicating the proper pronunciation. But as it is, we value the work as one of the most important in our library.

Yellow Fever—A Nautical Disease. Its Origin and Prevention. By JOHN GAMGEE. New York: D. Appleton & Co. 1879. Cloth. 8vo. Pp. 207. (For sale by Messrs. Woodhouse & Parham, Richmond.)

Seldom have we seen a more interesting detail of facts relating to the history of yellow fever than is to be found in this book. The compilation the author has made from an immense amount of material tends strongly to justify him in his conclusions, namely: Yellow Fever is "a nautical disease—a product of foul ships in the equatorial Atlantic;" and further, that "naturalization of the disease on land is impossible." It is further claimed that cold is the natural antidote of the disease. The author will soon publish a process by which he thinks houses of Rio, Vera Cruz, Havana, New Orleans, etc., can be sufficiently cooled at an expense not greater than heating houses in New York.

First Lines of Therapeutics. By ALEXANDER HARVEY, M. A., M. D., Emeritus Professor of Materia Medica, University of Aberdeen, etc. New York: D. Appleton & Co. 1879. 12mo. Pp. 278. (For sale by Messrs. Woodhouse & Parham, Richmond.)

These *Lines of Therapeutics* are "based on the modes and the processes of healing, as occurring spontaneously in disease; and on the modes and the processes of dying as result-

ing naturally from disease." The object of the work is to illustrate, on the one hand, the workings of the *vis medicatrix naturee*, and, on the other, the modes of fatal termination of diseases. It is well for the author that he states that he is not a "Therapeutic *nihilist*;" for otherwise his readers might have closed the book with less confidence in the Therapeutic art than he claims to have. These lectures—for the chapters are headed by this title—are entirely too speculative. The facts presented are as yet insufficient upon which to build a positive theory. The reading of this book may be a pleasure to those who delight in speculations; but certainly it is not an essential to the library of the busy practitioner.

Editorial.

The Delay in the issue of this February number is as embarrassing to us as it is worrying to our subscribers. As we feel that to them we owe an explanation, we would simply state that, after starting to press with the February number we found we did not have enough paper of the quality used in this journal to finish that number. While we immediately ordered more paper to be made for us, diligent search was instituted in the various paper markets to find enough paper of the proper quality to complete the issue; but we were everywhere informed that the paper used by us was a special quality paper which could only be made on specific order. We promise our subscribers that this fault shall not again occur, and hope they will now pardon the oversight.

The March number will be issued on or before the eighth of that month.

Proposed Changes in the New York Asylum Laws.—We have received a copy of resolutions adopted at a public meeting held in the Cooper Union, New York, in December last, together with a copy of a bill prepared by a committee appointed at said meeting, to be presented to the next Legislature, proposing important changes in the Lunacy laws of that State. The main features of the bill are to enlarge the State Board of Charities by adding two members from the medical profession and one from the legal, each having practised his profession in the State for at least ten years. The Board of State Charities thus enlarged shall be the Commission in Lunacy instead of a single Commissioner as now provided.

It is proposed that said Board shall have authority to make it the special duty of the three new Commissioners, to discharge the functions of the Board in relation to the insane. The avowed object of the movement is to have a Commission to permanently supervise the Insane Asylums and to model the Commission as nearly as practicable after the plan of the Lunacy Commission now in operation in Great Britain.

A Feat in Eye Surgery.—On Friday, January 23, 1880, Dr. J. J. Chisolm, the Surgeon in Charge of the Presbyterian Eye and Ear Charity Hospital, of Baltimore, found four patients who had accidentally applied at the Hospital on that day for surgical treatment for cataracts. Three of them were persons of 70 years of age, in whom mature cataract had formed; the fourth person was a young man 23 years of age, who had injured his left eye by a blow from a piece of stone one month before. Traumatic cataract had ensued from the accident; and the swollen lens, pressing upon the iris and protruding into the anterior chamber, threatened iritis. All of the patients desired to be relieved without delay, and an operation for cataract extraction was determined on for all of them. Each of these patients were in turn placed upon the operating table, complete chloroform anæsthesia was induced, and the cataract in each case was extracted by the Graëffe upper linear section.

When the fourth operation had been completed, and the eyes bandaged, and the patient ready to be transferred to his bed in the Hospital, one of the Hospital Staff, who had aided in the operations, and who had marked the time of bringing the first patient into the operating room, reported forty minutes as having been occupied in the performance of the four cataract extractions, including the four administrations of chloroform. The four patients had taken chloroform most kindly, and were very speedily in deep narcosis. The very short time occupied in these operations (ten minutes to each patient) indicates the methodical working of this Hospital Surgical Staff.

Dr. Chisolm has himself given chloroform nearly ten thousand times, and has never had a serious accident; and is rapidly approaching his thousandth case of cataract extraction. It is this great familiarity with both the anæsthetic and the surgical procedure that enabled him to accomplish a surgical feat that has not often been repeated.

Honors to Dr. J. Marion Sims in Boston.—A correspondent

in Boston writes us that "on January 24th, 1880, Mrs. Clements, of Newbury street, gave Dr. Sims a reception. Although Boston has the honor to have formed the first Gynæcological Society in the world, still this specialty has had hard work to obtain a footing in Boston. But the honorable reception given to the distinguished surgeon will, we think, form a new epoch in the history of the modern Athens. Dr. Sims never appeared better. Among the honored gentlemen present were representatives of the Medical Faculty of Harvard College, as Dr. Oliver Wendell Holmes, Professors Cheever, White, Instructors Knight, Folsom, Secretary of the Massachusetts State Board of Health, and Webber; also the venerable Dr. Thorndike, of the City Hospital, Dr. H. I. Bowditch, late President of the American Medical Association, Dr. Ephraim Cutter, Dr. John Homans, the coming Ovariologist of Boston, Dr. M. G. Wheeler, of Chelsea, and others too numerous to mention but just as worthy of it. The refinement, grace, elegance and tone of the occasion must have been very gratifying to the distinguished guest. He must have thought he was basking in the hospitality of the genial South."

Wanted—Information About Diseases of the Mastoid Bone.—

Dr. Henry G. Cornwell, Youngstown, Ohio, according to *The Transactions*, desires to obtain published papers, reports of cases, where operations were required, or death followed, or other matters of interest relating to Diseases of the Mastoid Bone—one of the sequellæ of chronic suppurative inflammation of the middle ear. Proper recognition will be made in a report now being prepared for publication.

Dr. M. Gonzalez Echeverria, now of Paris, France, the world famed neurologist, and especially known because of his invaluable original additions to our knowledge regarding epilepsy and kindred subjects, has recently been on a business trip to this country. During his visit to Richmond, he was the guest of the Editor, and made many professional friends in this community.

Dr. George M. Beard, the distinguished neurologist of New York city, one of the authors of a standard work on Electricity, etc., who has just completed his work on *Nervous Exhaustion*, etc., did us the compliment of a call while in Richmond, on his trip to the far South, February 13th, 1880.

Dr. S. Weir Mitchell, of Philadelphia, who has a world-wide fame as an author on Nervous Diseases especially, made a visit to Richmond, February 16th, 1880. A supper was given him and lady by Dr. Hunter McGuire, at which were a number of the prominent gentlemen of the profession of this city.

Dr. F. D. Cunningham, Professor of Anatomy in the Medical College of Virginia, has offered his resignation, to take effect with the completion of the present Winter Course of Lectures. By this resignation, the College loses one of its most faithful officers and able Professors. The election to fill the vacancy will take place early in March.

Dr. A. B. Cook, for many years Professor of Surgery in both the Louisville Medical College and the Kentucky School of Medicine, has resigned the position.

A Practical Treatise on Nervous Exhaustion (Neurasthenia), by Dr. George M. Beard, of New York, who has contributed some valuable papers to this journal on the subject, is announced by Messrs. Wm. Wood & Co., Publishers, etc., New York.

The Practitioner is the title of "an independent monthly journal, devoted to medical, surgical, obstetrical and dental science, edited by Harvey Byrd, A. M., M. D., and Basil M. Wilkerson, D. D. S., M. D.," which began in Baltimore, Md., January, 1880. This number contains 52 pages of very interesting reading matter; and knowing the editor so favorably as we do as a gentleman of deserved distinction in the profession, we wish sincerely that the journal may have a long and useful career. Price \$2.00 per annum in advance.

Infringement of Copy-Right Suit.—We have seen a statement in several of our exchanges that Dr. Wm. A. Hammond and Messrs. D. Appleton & Co., of New York, have instituted suit against Dr. Allan McLane Hamilton, of New York, and the well known Medical Publisher, Mr. Henry C. Lea, of Philadelphia, for infringing upon the copyright of Dr. Hammond's work on "Diseases of the Nervous System." We are very much surprised that Messrs. Appleton & Co. have consented to be a party to such a suit.

Mr. Presley Blakiston has purchased the general and im-

ported stock of Messrs. Lindsay & Blakiston, and will continue the publishing, importing and retailing of medical and scientific works at his new book rooms, 1012 Walnut Street, Philadelphia, Pa. He will furnish catalogues upon application.

The Galveston Medical Journal is a new candidate in the journalistic field, edited by Prof. Greenville Dowell, M. D., with the assistance of Drs. J. T. Y. Paine and T. J. Heard—all of Galveston, Texas—as associate editors. It is a 32-page journal, edited with vigor and showing earnestness in design. Dr. Dowell has a national reputation as an author, and has before this been a successful editor. He has able associates. Subscription \$3 a year, invariably in advance; single copy 30 cents. May the *Journal* “live long and prosper.”

Homœopathy in the California State Board of Health.—A homœopathic physician has been appointed by the Governor as a member of the State Board of Health of California. We join with the *Pacific Medical and Surgical Journal* (February, 1880), in urging the few of the regular profession who are threatening to refuse association on the Board with the homœopath not to decline to receive him as a member, nor should they resign their membership. “The latter course would not only be a triumph for the homœopaths, but it would give them an excuse for the cry of persecution.” “There is a homœopath on the National Board of Health; also one on State Board of Illinois. Unpleasant as it may be, such things have to be submitted to.”

Metric Note No. 10, giving the history of the spread of the International Metric System during 1879, has just been issued as a four page circular. It is a very interesting document, and may be had by any physician who remits a stamp to Dr. E. Seguin, of New York city.

The Indiana Medical Reporter is a 48 page monthly medical journal, published at Evansville, Ind., edited by Drs. A. M. Owen, J. E. Harper and Benj. F. McCoy, which came out for the first time, January, 1880. It has all the appearances of push and success.

Messrs. Codman & Shurtleff, the well known surgical instrument makers of Boston, warn us that “a man calling himself ‘M. Picker, M. D.,’ is travelling in the South, pretending to represent” them. “The party is undoubtedly a swindler.”

Graduates in Medicine Session 1879-'80.—Medical Department of the University of the City of New York, at its commencement exercises on February 17th, 1880, graduated, as Doctors of Medicine, 200.

Medical Society of the State of New York.—At the annual meeting held February 3d to 5th, 1880, the following officers were elected: President, Dr. Wm. H. Bailey, Albany, N. Y.; Vice President, Dr. Abraham Jacobi, New York, N. Y.; Secretary, Dr. Wm. Manlius Smith, 7 Myer's Block, Syracuse, N. Y.; Treasurer, Dr. Charles H. Porter, Albany, N. Y. The next annual meeting will be held at Albany, N. Y., February 1, 1881.

Annual Mortality of the World.—It has been calculated from the mortality tables of known countries that the annual number of deaths throughout the world is 35,693,350.

Obituary Record.

Dr. Samuel Selden, of Norfolk, Va., died at his home after a protracted illness on January 13th, 1880; age, 47. Dr. Selden was so exemplary in all his personal and professional walks as to leave a spotless record; and the loss to the profession of such a man is to be mourned as a calamity.

J. Soelberg Wells, M. D., F. R. C. S., Professor of Ophthalmology in Kings' College, London, and the author of a most valued *Treatise on Diseases of the Eye and their Treatment*, died at Cannes, December 2d, 1879.

Dr. John T. Banks, Professor of the Practice of Medicine in Atlanta (Ga.) Medical College, died at his home in Griffin, January 4th, 1880; age about 55 years.

Prof. Henry M. Bullitt, M. D., one of the Professors in the Kentucky School of Medicine, in Louisville, died on February 5th, 1880.

Dr. E. C. Seaton, author of the standard *Hand-book on Vaccination*, etc., died at his home in London, England, on January 26th, 1880.

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Original Communications.

ART. I.—**A Clinical Lecture on (I) Varicella; (II) Acute Articular Rheumatism and Endocarditis.** By J. LEWIS SMITH, M. D., Professor of Diseases of Children, etc., in Bellevue Hospital Medical College, etc., New York, N. Y. (Reported for *Virginia Medical Monthly*.)

Case I—CHICKEN-POX—ITS DIAGNOSIS FROM VARIOLOID.—*Gentlemen*: The eruption which came out on this child has now nearly disappeared. She has that common disease called chicken-pox, or varicella. She was in her usual state of health until Thursday last, when she was observed to be a little feverish, though not markedly so, being able to go about. On the day following (Friday), the eruption of varicella appeared over her body—not very extensively, perhaps in not more than fifty different places. This eruption has now begun to fade, the vesicular stage has passed, little brownish-red scabs remaining, which will soon be detached, leaving a stain which will disappear in the course of four or five days.

Varicella is not, in itself, a disease of much importance in practice, for very little treatment is required. The symptoms are always mild. The fever which is present on the day before the appearance of the eruption, shows an increase of temperature of not more than one or two degrees above normal. I remember but one case in which the symptoms were such as to require the presence of the physician. In that case, the child had eclampsia, a convulsion occurring on the first day of varicella. It is not improbable that there was a co-operating cause which produced the convulsion.

My object in bringing this patient before you is to call your attention to the differential diagnosis between this disease and varioloid; for I have known, here in this city, where it is a matter of great importance to determine at the first visit whether a patient has chicken-pox or varioloid, cases of the former to be mistaken for the latter, and reported as such to the Board of Health. I do not recollect ever having seen a case of varioloid in which there were not marked symptoms, such as severe frontal headache, pain in the back, and continued febrile movement during the three days preceding the eruption. But in this patient, as we have said, there was only a mild fever existing for hardly a day before the eruption appeared, the child being, in reality, well since. This is an important difference in the clinical history of the two diseases, for if, in a doubtful case, we find that the patient has had the symptoms to which I have referred, for three days preceding the eruption, the presumption is strong in favor of varioloid. So far as I have noticed, the mistake of confounding varicella with varioloid is liable to occur chiefly in those cases in which the varicellar eruption is very abundant on the face, so that the appearance of the patient, at first sight, is strikingly like that of severe varioloid, and the physicians express to the friends this first impression, and neglect to make the necessary examination, which would correct the error. Thus, in one such case, which I now recall, in which an erroneous diagnosis had been made, the face was so covered with the vesicles that the tip of the finger could scarcely be applied to the surface without touching one of them.

But apart from the clinical history of the disease, there are anatomical peculiarities in the eruption which suffice for diagnosis. The varicellar eruption, like that of varioloid, appears upon all parts of the surface—upon the buccal and faucial membrane, as well as upon the skin; but as compared with that of varioloid, it is much more superficial. It does not, as a rule, affect the deeper layers of the skin. When varicella produces a sore that leaves a scab, it is in a strumous child, or the inflammation of the eruption has been aggravated by rubbing. Among the many strumous children who come to this class, it is not rare that now and then one has one or

more permanent scars from varicella, but this result is exceptional. In varicella, after the slight fever has continued about a day, often without attracting attention, small hyperæmic spots like those of roseola appear upon the integument, not appreciable to the touch, or only producing a slight roughness. Within the next twelve to twenty-four hours, the epidermis over each of these spots is raised by a transparent liquid, not acid like the liquid of sudamina, but alkaline, being probably serum from the blood. Fresh eruptions appear for a day or two, and each vesicle, when unmolested, shrivels away in two or three days to a light yellowish-brown scab, not penetrating the cuticle, but lying loosely upon it, and is detached within two or three days. The stain resulting fades away like any simple hyperæmic spot.

Contrast these characters with the eruption of varioloid, in which, instead of the hyperæmic maculæ, there are papules in the beginning, felt as such under the finger. The papular is succeeded by the vesicular stage, but the vesicle is much firmer, much less fragile, from the firm partitions within it which divide it into compartments, than that of varicella; and while the latter is convex, this, when fully developed, is umbilicated. Moreover, varioloid runs a much slower and longer course than varicella in its later stages, as we have seen it does in the first stage.

The physician, aware of these differences between chicken-pox and modified small-pox, is certainly very careless if he make the serious mistake of confounding one with the other; and yet, as I have stated, physicians of this city, who afterwards became good diagnosticians, and prominent in the profession, have to my knowledge damaged their reputation, and lost the confidence of families, in their younger days, by this very mistake.

Case II—ACUTE ARTICULAR RHEUMATISM AND ENDOCARDITIS.—At the first clinic in this course, it will be remembered, I showed to the class five cases of valvular disease in children, between the ages of four and twelve years, all of whom, if I remember correctly, had had pains in their limbs—evidently of a rheumatic character—at some former period. I then stated, that acute rheumatism is not rare in children

between the ages of three and twelve years, and that it is not infrequently overlooked, and allowed to run on without treatment, the pains being attributed by the parents to too rapid growth, or other cause far from the truth:

That, in one day, without any special effort to bring them together, five such cases should have been present, affords presumptive evidence that acute articular rheumatism, and the endocardial lesions to which it gives rise, are more common than would appear from the books. Indeed, scarcely a week passes in which one or more children do not come to this class with endocardial lesions, which we are able, in most instances, to attribute to rheumatism; and from having seen many of these cases, I am able to state the following facts in reference to acute articular rheumatism, and its lesions as they occur in children.

First, Rheumatism, though common in childhood, appears to be rare in infancy. But that infancy is not exempt, we have had proof during the present session. It will be recollected that an infant was shown to the class on January 3d, having the following history: Thomas Flannagan, aged 18 months, was well, and the use of his limbs free and without pain, till three weeks ago, when, according to the mother, he refused to use his legs, and attempts to make him stand were resisted, and were so painful as to elicit cries. One week later, the two wrists and the knuckles were swollen and painful. These symptoms have, in great part, abated, but we still observe evidences of pain when the joints are pressed, and a disinclination to move the limbs. The history of this case is quite different from rachitic joints, and there can, I think, be no mistake in the diagnosis. The occasional occurrence, therefore, of idiopathic acute rheumatism in the infant must be admitted. Scarlatinous rheumatism occurs also in infancy, as well as in childhood.

Secondly, The articular inflammations begin in the joints of the lower extremities, especially in the ankles and knees, and in many children the upper extremities are not involved; while in other patients, certain joints of the upper extremities—particularly the wrists—become involved consecutively to the inflammations in the lower extremities.

One and the chief reason why rheumatism in children has been so often overlooked is, in my opinion, that the articular inflammations are not so severe, are not accompanied by so much swelling and pain in a large proportion of cases, as in adults, so that it is not unusual for the child to walk about, though with some suffering, during the continuance of the rheumatism.

Thirdly, Rheumatism in the child is very liable to affect the heart, causing endocarditis, with the consequent anatomical changes which forever cripple the action of this important organ. And the heart, too, not infrequently becomes seriously damaged, when the articular inflammations have been very slight and transient, and confined to one or two joints. Thus, I recollect one case of serious valvular disease, attended by a loud *bruit*, which originated in an attack of rheumatism a few months previously, the nature of which had not been suspected by the attending physician, because the only articular inflammation had been transient, and confined to one joint, namely, the ankle. There was in this case marked febrile movement during the continuance of the rheumatism.

Fourthly, The valvular lesion resulting from rheumatic endocarditis in the child is, in a large majority of cases, mitral, the aortic orifice not being affected, or affected less in degree; and the *bruit* most commonly observed is, I think, the mitral regurgitant.

I would state in this connection, that when there is a loud mitral regurgitant in the child, it is often difficult to determine whether there is, or is not, at the same time, a systolic aortic, as from the small size of the heart the aortic and mitral orifices are very near each other, and the aortic direct and mitral regurgitant are produced at the same time. In a large proportion of the cases, which, from time to time, have come to this class, the loud *bruit* heard when the ear was applied over the left scapula indicated regurgitation from the left ventricle into the left auricle. Now and then, also, we can ascertain by auscultation the presence of pericardial lesions, in addition to the endocardial, but it is only in exceptional cases that we are able to detect them.

Fifthly. Endocarditis and the consequent valvular lesion result, in exceptional instances, from scarlet fever. Thus, in my private practice, a boy of four years, Freddy M., sickened with scarlet fever on March 12th 1879. He had, on the first day, an axillary temperature of 104° , and the usual vomiting. The disease, of a severe type, ran a favorable course; but on March 14, he complained of pain—evidently the scarlatinous rheumatism—in both ankles, both knees, and in the left wrist-joint. On March 17th, the articular pains continued, while the other symptoms were abating. His urine this day was examined, and found to be free from albumen. On March 29th, seventeen days after the commencement of scarlet fever, as he was fretful and wished to remain quiet, he was carefully examined, and was found to have endocarditis, with distinct mitral regurgitation. The record of the 29th states: "Is of his own choice constantly in bed; has complained daily for several days of pain in legs, arms and back, when he is moved. Pulse, 148; axillary temperature, 103° . His urine has contained a deposit of urates on cooling during the last two weeks, but is free from albumen; there is some cellulitis under the right ear which may produce a part of the febrile movement."

Nearly eleven months have elapsed since this record, and I have recently examined the boy. His general health is fully restored, but there is a loud mitral lesion producing a murmur heard distinctly over the scapular region and at the apex of the heart. There is apparently some enlargement of the heart, as the apex beat is in and a little to the left of the *linea mammalis*. There is, and has been for months, a slight cough, which does not seem to be due to pulmonary œdema, but probably to a slight bronchial catarrh, due to congestion of the bronchial mucous membrane, in consequence of the regurgitation of blood. The pulse is 98 and the respiration 26 per minute; the præcordial region bulges, being about one-third of an inch higher than the opposite side, so as to destroy the symmetry.

Therefore, we must consider scarlet fever an occasional cause of endocarditis, but whether in a given case it is the immediate or remote cause, may be uncertain. In the case

which I have related, the endocardial inflammation may have been produced by the irritating effect of the scarlatinous poison contained in the blood, or to the lactic acid, or other noxious principle to which the rheumatism was due. Moreover, the urine, though loaded with urates, as in ordinary rheumatism, contained no albumen, but in a certain proportion of cases similar to this one, nephritis and uræmia are also present, and it is well known by pathologists that the irritating effect of urea, as it flows in the blood over the endocardium, is also a cause of endocarditis, as we sometimes observe in Bright's disease of adults. Therefore, in a case of scarlet fever, when there are the rheumatic and nephritic complications, and endocarditis arises, we are at a loss to say whether the noxious principle, which causes the inflammation, is the scarlatinous, rheumatic or uræmic. But this I know, that serous surfaces, as the pleura or pericardium, do sometimes become inflamed in scarlet fever, when there is no symptom or sign of articular or renal disease, and when there has been every precaution against exposure to cold, so that there is no other assignable cause of these inflammations except the irritating property of the blood imparted to it by the scarlatinous poison.

It is evident from what I have stated, that it is very important for the welfare of the patient that rheumatism should be early diagnosticated, and the proper remedies employed, in order that the heart may be saved from the great danger that threatens it. Fortunately, we have discovered, in recent times, a remedy which meets the indication, namely, salicylate of soda, which may be given in five-grain doses, every second or third hour to a child of six or eight years. I believe that, in the majority of cases, if this medicine is given from the first or second day, the articular inflammations will begin to yield in forty-eight hours, and the heart, if not already involved, will escape. It is a nauseating drug, and I am in the habit of employing it in the elixir adjuvans—which covers the taste remarkably well. After a few days, if the inflammations begin to abate, it should be given less frequently; but it should not be entirely discontinued for some days, as the disease is apt to return if the treatment is inter-

rupted too soon. Any impairment of the appetite, or depressing effect, which may result from the use of this drug, is obviated by the stimulating and stomacheic properties of the vehicle. The following is the formula which I am now in the habit of employing:

R Sodæ salicylat.....5j
Elix. adjuvantis.....3iij. Misce.

S.: Dose, two teaspoonfuls.

These remarks are preliminary to a case which I wish to present to the class.

This girl, aged 11 years, had rheumatism at the age of three years, which appears from the history to have been unusually severe, as the joints of both upper and lower extremities were affected. She now comes to the class—eight years after the rheumatism—on account of symptoms due to the endocardial lesions, which have embarrassed the action of the heart for so long a time. Her general health is good, but a loud murmur is heard when the ear is placed over the left edge of the sternum at its point of junction with the second rib. The murmur is conducted by the current of blood, so as to be distinctly heard in the right infra-clavicular region near the axilla; it is less loud at the apex of the heart, and is obviously systolic. It is heard also when the ear is applied over the left scapular region, where we also hear very distinctly the mitral regurgitant murmur when the mitral valve is incompetent; but unlike the latter murmur, it becomes louder and more distinct as the ear is carried upward and inward toward the base of the neck. The mitral orifice does not seem to be involved in this case. The heart is moderately enlarged, for the apex beat is a little lower and external to the usual point. The acute inflammation has long since abated, and anti-rheumatic medicines are no longer required.

Although we are not able to repair the injury to the heart, we can do much to relieve symptoms, prolong life, and make patient comfortable. Quietude, light exercise, freedom from excitement and fatigue, normal digestion, and regular alvine evacuations are required. When the action of the heart is rapid and oppressed, and the circulation retarded, the medicine which, above all others, is most useful as a tonic to this organ, moderating its excited action and increasing the force of its contraction, is *digitalis*. A child of five years can take one teaspoonful of the infusion of *digitalis*, or three or four

drops of the tincture, every three to six hours, according to the urgency of the case. Quinine is also a useful heart tonic in moderate doses, and in all severe cases I order a belladonna plaster to be applied over the heart. Alcoholic stimulants and the ammoniacal preparations are sometimes useful, as is also the occasional employment of sinapisms over the chest. In case pulmonary œdema arise which is apt to occur sooner or later, especially when there is mitral regurgitation, I have obtained benefit from the following prescription :

R Potas. acetatis..... ʒvj
 Infus. digitalis..... ʒvii

M. S.: Dose, one teaspoonful every three hours.

ART. II.—**Puerperal Convulsions.** A Lecture delivered at the Medical College of Virginia, by R. T. COLEMAN, M. D., Professor of Obstetrics, Medical College of Virginia, etc., Richmond, Va. (Reported by PAULUS ÆMELIUS IRVING, M. D., House Surgeon City Almshouse, Richmond.)

Gentlemen,—Of course, on a subject such as this, which has engaged for so long the attention of the ablest members of our profession, no teacher can claim any special credit for originality. He does well who gathers together the scattered rays of truth as they are found in the literature on this subject, and separating them, by rigid practical tests, from what is false, brings them to a focus, so as to illuminate and illustrate a disease, second in its difficulties to no other which may claim the attention of the medical attendant.

No enemy of the parturient woman—not even hæmorrhage nor puerperal fever—is more calculated to appall the *accoucheur* than puerperal convulsions. Assailing, and often without premonition, their victims during gestation, during labor, or even breaking rudely in upon the joyous congratulations to the mother—that she has passed through the perils of a tempestuous parturition, and is safely moored in the haven of maternity—coming under any of these circumstances, falling like a thunderbolt from a clear sky during gestation, substituting joyous expectancy by terror in labor, and darkening with the shadow of death the lying-in room, but a moment before so bright with gladness—no wonder that this scourge should strike terror to the hearts of friends and relations, nor that it

should shake the nerves of the stoutest-hearted medical attendant.

Thanks to the advance in science, this disease has been shorn of much of its terrors. Instead of one-half of the cases proving fatal, the mortality is stated now as *one in four*; and I am sure that this percentage is much too large—certainly, in my experience it has not exceeded half of this.

Puerperal convulsions may simulate other nervous disorders by which women may be affected, and hence eclampsia has been sub-divided by various writers into the hysteric, epileptic, cataleptic, tetanic and apoplectic varieties. Yet they are *sui generis*—different in their type, peculiar in their symptoms and history, and demand important modifications in their treatment.

Puerperal convulsions, as their name implies, are peculiar to the puerperal woman, and find their origin in that impressibility of the nervous system which commences with pregnancy, reaches its maximum with the close of the period of gestation, and gradually disappears on the death of the *fœtus in utero*, or after its delivery.

Every observant medical man must have been struck with that increased excitability of the nervous system—that augmented sensitiveness generated by pregnancy. Mentally, morally and physically, women are rendered more impressible by pregnancy, and are, therefore, more prone to nervous disorders. The nervous system of the pregnant woman is closely assimilated to that of the young child; and we are all familiar how readily convulsions are excited by trivial causes in the child; slight, sudden noises, crude ingesta, or worms in the stomach, innocuous in the adult or larger child, will often throw an infant into convulsions. The irritability of the nervous system characteristic of pregnancy is, then, the essential predisposing cause of convulsions. I wish it distinctly understood that I believe *this irritability of the nervous system is a predisposing, not an exciting, cause of convulsions*. This point, I think, is of practical value in its bearing on the management of the uterus in the treatment of this disease. The true puerperal convulsions, then, can only occur when the cerebro-spinal axis has been operated on by an

excited condition of the incident uterine nerves, the excitement depending on the puerperal state. When the spinal marrow has thus become surcharged with excitability, then convulsions may be excited by a number of causes—centric and reflex—now to be considered.

Centric causes, or those that act directly on the nervous centres without the intervention of incident nerves, may be intra-cranial, intra-vertebral, or both.

Most prominent among these centric causes is *albuminuria*, or that condition of the blood which obtains in albuminuria. In consequence of the very small amount of urine passed, the kidneys fail in the performance of their normal office as emunctories; the urea thus accumulates in the blood. The blood—poisoned by the urea, or, according to some observers, by the conversion of this urea into carbonate of ammonia—by its circulation in the spinal cord, aggravates the erethism already alluded to as existing in pregnancy, until the cord, surcharged with irritability, upon any provocation, as, for example, indigestion, the coming on of uterine pain, etc., discharges itself through the motor nerves upon the muscular system, giving rise to convulsions. Effusions of blood or serum within the cranium—even plethora of the brain, by counter-pressure on the medulla oblongata, or an analogous condition of things in the vertebral column—are efficient centric causes of convulsions.

Psychical causes, acting through the brain, and independent of incident nerves, are centric. All observers have been struck with the aptitude to convulsions in unmarried women who become pregnant.

It is wonderful how a mere spark of emotional influence will fire off the train of nervous irritability in the puerperal woman—not only violent grief, terror, etc., but the most trivial emotional disturbances.

Mauriceau mentions the case of a lady who, having passed through her labor without any untoward symptoms, was thrown into convulsions by disgust at the entrance into her chamber of a coxcombical friend who was highly perfumed—probably with his hair parted in the middle, and possibly with a small cane in his hand.

Tyler Smith also mentions the case of a patient of his who was successfully delivered two or three days before, who, by the abrupt entrance into the room of her husband, who had unexpectedly returned from a long and perilous visit, was thrown into convulsions. Instead of pressing to his heart a happy wife and mother, he held in his arms the rigid form of an epileptic.

Reflex or Eccentric Causes.—These causes, unlike the centric, require, for the display of their powers, afferent or incident nerves, which convey the impression to the spinal column, whence it is reflected through the efferent or motor nerves upon the general muscular system. This kind of action has already been alluded to in the convulsions excited in young children by the presence of worms or crude ingesta in the stomach and bowels, irritations of the rectum, etc.

So, in the puerperal woman, crude, indigestible matter in the stomach and bowels, irritations of the rectum and bladder, mammary irritation from sore nipples, etc., have all been known to excite convulsions. The same may be said of the pain and irritation incident to the dilatation of the os uteri. So the pressure of the child upon the sensitive tissues of the vagina and the pelvic nervous tracts during its transmission through this canal, are potent and prolific sources of that reflex irritation competent to the production of convulsions. When convulsions have been once excited, very trivial irritations of the os and cervix uteri may keep them up.

Denman, in one of his cases, noticed the recurrence of convulsions whenever he manipulated the os to promote dilatation, and was compelled to desist.

Ramsbotham, the younger, mentions a case where the introduction of the hand to remove an adherent placenta caused convulsions and death.

No elaborate effort is made to divide the foregoing causes into *predisposing* and *exciting*, as the same cause is at one time predisposing, and at another, exciting; and again, you will find that one and the same cause will play both rôles. Under the pressure of one or more of the foregoing causes, the pregnant woman passes into convulsions. Sometimes, as has been stated, these convulsions are ushered in without premonition; but usually, we have certain *premonitory symptoms*.

Premonitory Symptoms.—The most marked of these are cephalalgia, disorders of vision and hearing, epigastric pain. The patient complains of ringing in the ears, of *muscæ volitantes*—"those motes that people the sunbeam;" at one moment she will exclaim, "Oh! my stomach!" the next, "Oh! my head!" and then pass into a convulsive paroxysm. Now and then, headache, of a violent type, referred to some particular part of the head, as the temples, or top of the head, is the only premonitory symptom.

Just here let me say that headache, in the pregnant woman, demands and should always receive the earnest attention of the physician; for although it may be a matter of comparatively trivial moment, yet it is usually a symptom of evil omen to the patient.

Whether introduced by premonitory symptoms or not, the convulsions, when established, present an assemblage of symptoms never to be forgotten by the observer.

Symptoms.—The patient's eyes become for a few moments fixed, as if staring at vacancy; the head is slowly turned towards one or the other shoulder, and then it is usually as slowly turned towards the other; she instantly becomes insensible. The facial muscles become terribly agitated; the eyes roll in their sockets, and become so upturned that only the inferior segment of the sclerotic is visible. The agitation extends to the muscles of the neck, which rigidly draw the head to one side, and rapidly all the muscles of the trunk and extremities become involved in the convulsive movements, with which are associated much of tetanic rigidity. The extensors of the trunk, by their violent contractions, have a tendency to produce *opisthotonos*; the arms are tossed about, while the lower extremities are rigidly straightened out, so as to prevent locomotion, by fixing the patient on her back—thus differing from the manifestations in hysteria. The mouth is generally open at first, with the tongue protruding; in a little while, the teeth close upon the tongue, wounding it, and reddening with blood the mucus and saliva expelled with every hissing convulsive expiration. Deglutition becomes impossible; the skin, lips, tongue and face become at first pallid and then livid; the external jugular veins

are turgid with blood, and there are wild, convulsive throbbings of the carotids. Under these circumstances, the face and neck become swollen from venous congestion and serous infiltration. No trace of beauty—it matters not how much before existed—can be recognized in that blood-stained, darkened, bestial countenance. The pulse is strong, slow and resistant at first; but as the paroxysm continues, it becomes more and more feeble, until it can scarcely be recognized at the wrist. The respiration, at first oppressed, becomes short and convulsive; and if the convulsion be violent and protracted, it becomes stertorous, intermittent, and it may be fatally suspended.

These fits may vary in duration, from one to eight or ten minutes; then they gradually pass off; the spasms subside; the respiration becomes more normal; the pulse fuller and softer; the skin becomes warmer, and the lividity of the countenance is succeeded by a brighter color.

The patient now manifests a varying degree of consciousness, sometimes seeming quite revived, asking and answering questions, and again she remains dull and bewildered for a long while. In the more unfavorable cases, she remains dull, insensible and occasionally perfectly *comatose*.

The paroxysm may not return; but usually, with greater or less intensity, it returns at intervals of a few minutes to several hours. The longer the intervals, and the more complete the return of consciousness, the more favorable the prognosis. Yet I have known convulsions lasting for six or eight hours, with scarcely appreciable intermissions, and yet the patient has done well. As a rule, the removal of the cause secures the disappearance of the convulsions, unless the brain or spinal marrow has sustained some serious lesion.

Should the woman be in labor at the onset of convulsions the pains may be suspended, but more usually they become irregular and less efficient. Sometimes, however, the labor advances with surprising rapidity, although the pains are feeble, in consequence of the great relaxation of the tissues.

Recoveries after convulsions are often as rapid as in ordinary cases of natural labor; occasionally, uneasiness of the head, and a certain amount of intellectual habitude remain

for a good while after confinement. Usually, however, convalescence is complete, nor does any predisposition to a recurrence of these attacks in subsequent confinement seem to be engendered.

It is an interesting psychological fact, that patients have no recollection of anything that occurs during these convulsions—no remembrance of their pains or of their conversations; it matters not how rational in the lucid intervals, it is all a blank.

Post-mortem examinations reveal no fixed characteristic lesions; in many cases, no lesions can be discovered. In some cases, we find plethora of the brain and spinal marrow; in others, effusions will be found on the surface or at the base of the brain, and occasionally in the cerebral ventricles and in the spinal canal. Cazeaux believes that *albuminous nephritis* is the most common lesion; but so far as the naked eye can be relied on, he does not seem to be borne out by *post-mortem* examinations.

Prognosis.—Of course this is doubtful, and will vary with the nature of the exciting cause, the severity of the convulsions, and the skill with which the cases are managed. Yet the prognosis is not so unfavorable as formerly. It is more favorable when the convulsions set in during gestation than labor, often subsiding under proper treatment, and permitting the patient to go on to her full term—the labor terminating without any untoward symptoms. Unfortunately, the occurrence of convulsions often produces *premature labor*.

Convulsions commencing during the first stage of labor are more severe and obstinate than when occurring during the second stage; convulsions occurring after labor are less dangerous. The prognosis is bad, however, if convulsions, commencing before delivery, persist after the removal of the cause.

Dr. Merriman reports that sixty-six per cent. of the children born in puerperal convulsions die. This immense mortality has doubtless been enhanced by that war which doctors have been taught to wage on the child *in utero*, as soon as convulsions occur. The induction of premature labor, forcible dragging of the infant through an imperfectly dilated os

uteri, after having first subjected it to the risks of version, embryulcia, etc., have more to do with this immense mortality than any evil influence propagated from the mother to the child.

Frequency.—According to the table of Churchill, puerperal convulsions occur once in six hundred and nineteen cases of labor, and of these cases 96 per cent. are found in primiparæ.

Prophylactic Treatment.—Of no disease can the aphorism, "an ounce of prevention is worth a pound of cure," be more correctly affirmed than of puerperal convulsions. When a medical man is engaged to attend a case of labor, he should always pay a preliminary visit; nor should this be a mere visit of courtesy. He should closely scrutinize the condition of his prospective patient, see if there be any scantiness of the urine, puffiness of the eyelids, face, back of the hands, anasarca or œdema anywhere, any disorders of the vision or hearing, any headache. These may make their appearance as early as the sixth month of gestation, and always excite the suspicion that albuminuria exists. To settle this point, an analysis of the urine by either heat or nitric acid, or both, should at once be made. If albuminuria be found to exist, then its significance cannot well be exaggerated. To the thoughtful and experienced practitioner, it means the probability of *premature* labor, *puerperal* convulsions, *post-partum* hæmorrhage. These dangers of albuminuria, my students, to aid the memory, speak of as the three P's, and they should be capital letters.

The existence of albuminuria having been ascertained, treatment for its removal should at once be resorted to. Of the means to be employed, the most potential are, repeated *small bleedings* from the arm; or in the few cases where general blood-letting is contra-indicated, local bleeding by cups over the region of the kidneys. Often have I seen the distressing and perilous symptoms of albuminuria removed by this means alone, and the patients go on without further trouble to the completion of their pregnancies. I know it will be said by the advocates of the chloro-anæmic theory of the production of convulsions, "What, will you still further

despoil the blood?" I respond, "the albuminuria is despoiling the blood; capture the thief who is robbing you, and you not only retain what he has left you, but get back that of which you have been robbed." Remove the albuminuria, and you not only escape the three capital dangers that hinge on it, but you give the blood an opportunity to regain its normal condition.

Often, however, the bleeding alone is insufficient, and auxiliary agencies have to be used to stimulate the vicarious action of the skin, and to re-establish the healthful action of the kidneys. To meet the first indication, warm baths, Dover's powders at bedtime, and any of the diaphoretics that may best agree with the stomach, such as spirits of Mindererus or sweet spirits of nitre, and in cases where anasarca is very great, jaborandi may be used with great advantage. To meet the second indication, I usually employ the following diuretic pills:

Ry Hydrarg. chlor. mit.....gr. vj
 Pulv. digitalis.....gr. xij
 Pulv. scillæ.....gr. xlviii

M. Fit. pill No. xxiv (24). Sig. Take one pill three times daily.

There is a remarkable impressibility to mercury in albuminuria; hence, the calomel in the above prescription is given in homœopathic doses, and rarely should it be pushed beyond the above amount, as it may produce ptyalism.

Should this torpidity of the kidneys prove obstinate, drop the calomel, but continue the squills and digitalis, and their diuretic action is largely reinforced by washing down each pill with a wineglassful of juniper berry tea containing about twenty grains each of the bitartrate and acetate of potash. After the kidneys have, by the above means, been restored to their normal activity, and the albuminuria has disappeared, or nearly so, from the urine, then put the patient on the tincture of the chloride of iron, fifteen to twenty-drop doses three times a day—not only to repair the waste in the blood, but on account of its known favorable action in albuminuria.

But, as we have seen, albuminuria is by no means the only cause of puerperal convulsions. Strangury from the applica-

tion of a blister, an accumulation of fæces in the rectum, crude ingesta in the stomach and bowels by reflex action on the cerebro-spinal axis, rendered hyperæsthetic by pregnancy, may cause convulsions.

The lesson here is caution in the use of blisters, and precaution against strangury when they must be used, by covering the blister with tissue paper and bathing the surface to be blistered with spirits of camphor; and should it occur, to control it by emulcient diuretics and opiates, preferably in enemata, and to keep the bowels in a soluble condition during pregnancy, and the avoidance of food difficult of digestion. I knew a lady who ate heartily of watermelon at night, which caused convulsions and death before morning. Another who had convulsions from making a hearty supper largely composed of fruit cake, but who fortunately survived, and so I might go on and make a strong indictment against a large number of indigestible substances.

There is no subject connected with the management of pregnancy more important than a proper regulation of the diet. Many women of robust digestion, who escape the dangers of indigestion spoken of above, yet substantially incur the same hazard by enriching too much the blood, and bringing about a plethoric condition of the system, which, if not relieved by a timely bleeding, abstemiousness from food and purgation, may eventuate in convulsions. In a large majority of cases, pregnant women should eat very sparingly of meat during the last month or six weeks of pregnancy. So valuable is the observance of dietetics, that one of the writers of our periodical medical literature claims that an exclusively milk diet had prevented certain eclamptic patients of his from having convulsions. Without going further into an analysis of the various prophylactic agencies, suffice it to say that a woman not only has to provide material for the waste in her own system, and a supply for the development *in utero* of the fœtus, but that the debris of the tissues broken down in the act of the nutrition of the mother and child, have to be eliminated from the mother's blood; and hence the various emunctories—kidneys, liver, bowels, etc.—should be kept in good working order, so that a healthful physical,

and a happy mental equilibrium may be maintained. We must not forget that psychical causes play no very subordinate part in the production of convulsions. Sterne has said that "the mind and body are like a jerkin and a jerkin's lining; rumple the one, and you rumple the other." This nice adjustment of sympathies between the mind and body we are too apt to forget in all nervous disorders.

Curative Treatment.—The cases are rare indeed where the lancet is not the first and most urgently demanded remedy. Usually, congestion of the nerve-centres exists as a precursor and proximate cause of convulsions, and in every case of actual convulsions, the brain is, of necessity, congested. On the one side, under the violent action of the heart, the carotids throb wildly, actively congesting the brain; on the other hand, the turgid jugulars show that the imperfect action of the lungs is damming back the venous blood, and passively deluging the brain. Ground between this upper and nether mill-stone, organic lesion, effusion, etc., must occur, unless timely relief is afforded; and in no way can this be so efficiently and promptly accomplished as by bleeding. Bleeding is not only protective in its action on the brain, but curative by its sedative action on the spinal marrow, and by its relief of plethora of the brain, which by counter-pressure on the medulla oblongata, causes and keeps up the convulsions. As soon, therefore, as a patient complains of violent pain in the head, disorders of vision and hearing, etc., do not wait for the convulsion, but take from the arm fifteen, twenty, thirty, or even forty ounces of blood, according to the character of the pulse and the necessities of the case. If convulsions have already occurred, do not wait for them to subside—delay may result in irretrievable damage—but bleed at once.

The blood in convulsions will be dark, and run slowly at first; but as the pressure is taken from the brain, heart and lungs, it will flow more freely and be of a brighter color.

Before the introduction of *veratrum viride*, a repetition of this bleeding was often demanded; but if enough blood be abstracted in the first instance, thanks to this valuable auxiliary, this is now rarely necessary.

I am aware that in this age, when there are so many advo-

cates of the chloro-anæmic condition of the pregnant woman, the foregoing practice will be harshly criticized; but are not the reasons for it sound? Because animals, after excessive losses of blood, die in convulsions, is this any reason why eclampsic women should not be bled? Is there any analogy between the mild convulsive movements, pallid countenance and gaseous pulse of the subject of excessive hæmorrhage, and the violent tetanic convulsions, livid countenance, throbbing carotids, turgid jugulars of the patient laboring under puerperal convulsions? Nor is it at all likely that a sensible doctor could confound the *two* conditions. There are doubtless some few woman who, in eclampsia, cannot tolerate the loss of much or any blood; but they must be few indeed, when the abstraction of some blood—either by the lancet or cups—is not demanded. Put even the advocates of the chloro-anæmic theory on the stand, and what do they tell us? Tyler Smith says, “no time for depuration of blood now; bleeding must be immediately employed.” Cazeaux says, “it must take precedence of all other remedies.” Prof. Simpson, of Edinburg, and Braun, of Vienna, express the same sentiments. These are all chloro-anæmists; while Burns, Churchill, Collins, Dewees, Meigs, Hodge, give forth no uncertain sound, but are earnest, ardent advocates of the lancet. Dr. Ramsbotham calls the lancet the “sheet anchor of the practitioner;” and Dr. Gooch avows that he never lost a patient where he resorted to free blood-letting. It may be abused; but in the hands of a doctor of ability and nerve, it deserves the designation of Dr. Ramsbotham, “the sheet anchor of the practitioner.”

A truce having been gained by the bleeding, this must be industriously employed in removing, as far as practicable, all causes of convulsions. If there be crude ingesta in the stomach, administer twenty grains of sulphate of zinc; if the patient cannot swallow, use hypodermically from a twelfth to a fourth of a grain of apomorphia. The brain can now bear the effects of emesis, which, before the blood vessels were relieved, might have proved fatal. Administer a full stimulating enema, to unload the bowels and to act as a revulsive. Give from ten to fifteen grains of calomel to promote the se-

cretions and excretions of the bowels. Remove all ascertained disturbing influences, but above all use the two most important auxiliaries to bleeding, the *tincture of veratrum viride* (Norwood) and *chloroform*.

The pulse having been reduced in force and frequency by the lancet, you can now, by means of tincture of veratrum viride, lay your hand on that heart and tell it how fast and forcibly it shall beat. Give Norwood's tincture in ten drop doses every twenty, thirty or sixty minutes as required, until you have reduced the pulse to sixty beats per minute; and then suspend the remedy until the pulse again threatens trouble, when you can quiet it with the same doses at longer intervals. This remedy, by its controlling influence through the heart on the cerebral circulation, is a most valuable agent. Persons who have been in the habit of using tincture of veratrum viride in fevers, pneumonia, etc., and who have nervously watched the effect of five drop doses every three or four hours, will be startled at the large doses, and short intervals here suggested; yet, while I have seen disagreeable depression in fevers and pneumonia from tincture of veratrum viride administered in the ordinary way, I have never, after repeated tests, seen any untoward symptoms from its use, as urged in puerperal convulsions. Indeed, certain diseases beget tolerances for certain remedies. For example, what large, and under other circumstances, fatal doses of *opium* can a woman with puerperal fever take, not only without damage but with absolute benefit? May not the grandest triumphs of medicine yet to be achieved lie in the discovery of that wonderful tolerance of certain drugs in certain diseases, which seems to demonstrate their especial appropriateness as remedies? Is it visionary to suppose that there is in nature, if we could but discover it, a remedy for physical ills as perfect as that for moral ills? Simultaneously they were ushered into the world. Sickness and death that assail the material man came hand in hand with those moral ailments for which there is a perfect cure in the Balm of Gilead. Why not a cure for our material ills? Will it be a miracle in the millennium that men live a thousand years, or will it not be rather, as humanity approaches God in purity, so it will ap-

proximate him in wisdom, so nearly that, with a full knowledge and a heartier appreciation of the remedy spiritual, and the remedies physical, supplied by God's beneficence, we shall be easily kept mentally, morally and physically whole.

While congestions are being relieved, and the force and frequency of the pulse controlled by bleeding and veratrum viride, we have another most important indication to meet; and that is, to subdue, or at least to hold in abeyance, that irritability of the cerebro-spinal system, which, upon the slightest provocation, will blaze out again in convulsions. *Chloroform* meets this indication. It not only soothes the crethism of the spinal marrow, but it takes possession of it, so as to prevent its being made the medium through which the various excitants can make themselves potential in the production of convulsions. As quinine takes possession of the nervous system and prevents malaria, employing it in the chill manifestation, so chloroform, by supersession, gives no room in the spinal cord for the expression in convulsions of the various causes that tend to produce them. I use it in connection with the veratrum viride, permitting its influence to pass off so as to administer, *pro re nata*, the tincture of veratrum viride, and of course omitting its use for longer or shorter intervals, when there are no threatenings of a return of convulsions. These threatenings should be promptly met by the use of chloroform and warded off. When the intervals between the convulsions are long, or if the convulsions be slight, chloral hydrate, in twenty or thirty grain doses, or combined with an equal amount of bromide of potassium every two hours, will serve as a most efficient substitute for chloroform.

The use of chloroform and chloral have very largely and properly superseded the use of *opium*. The opium treatment of puerperal convulsions gave a frightful mortality—fifty per cent.

With the introduction of bleeding by Denman, Dewees, the elder Ramsbotham, the mortality was reduced twenty-five per cent. And yet opium can be occasionally used with advantage; but we should always bear in mind that when the circulation is full, opium is a stimulant to the brain and

spinal marrow, and aggravates congestion, whereas, if the circulation be reduced by previous bleeding, or there be anæmia, opium acts as a sedative, and benignly.

In addition to the means which have been suggested, cold applications to the head, acting not only as a sedative to the intra-cranial portion of the spinal marrow, but also by diminishing the amount of blood circulating in the brain, thus relieving the counter pressure on the medulla oblongata, are valuable adjuvants.

We should also remember what an important part emotion plays in the production of convulsions, and their repetition. Hence all excitements of every kind should be banished from the sick room, and in the lucid intervals, patients should not be permitted to observe any evidences of alarm or distress on the part of the physician, attendants or friends. Very slight emotional disturbances, the sight of the child, or the mention of its birth, has been known to precipitate a return of convulsions.

The foregoing covers all the more essential features with reference to the general management of a case of eclampsia. We come, however, to another and very important feature in the management of these cases, about which there has existed great confusion of thought, and which has led to much erroneous and pernicious practice. I allude to the special management of the uterus in convulsions.

Many obstetricians have contended (and the influence of their teachings is still too much felt) that as soon as convulsions occur, war must be made on the child in utero, by the induction of premature labor, or if labor has commenced, to hurry it up by craniotomy, version, etc. This practice is based on the idea that the child in utero is the *exciting*, when it is only the predisposing cause of convulsions. The objections to the induction of premature labor are obvious enough. The uterus is quiet; there are no reflex irritations from this source of the brain or spinal marrow. By the induction of premature labor, we bring on uterine pains and all those irritations which spring from dilatation of the os and cervix uteri, and the transmission of the child through these and the pelvic canal, known to be potential causes of convulsions.

In addition to that, the labor has often to be completed by artificial means, most detrimental to the child, whose safety is still further compromised by its immaturity. Why incur all the risks to mother and child when, under judicious treatment, the convulsions will often pass away and the mother go on to a safe delivery at full term without any untoward symptoms.

Occasionally a woman may die undelivered under this management; but in the main, it will, I believe, secure a large economy of maternal and infantile life. So during the first stage of labor, avoid rude manipulations of the uterus in endeavors to hurry up dilatation, or in forcing a hand through an os uteri of the "size of a shilling" for version. Facilitate dilatation by mucilaginous injection, belladonna ointment, etc. Your bleeding, etc., has already done much in this direction. Do not even rupture the membranes prematurely, as advised by Tyler Smith, Cazeaux and others, as this often retards labor, and makes it more difficult. Satisfy yourself with protecting the brain and restraining the convulsions until dilatation has been accomplished. Remember that five out of seven mothers die, in enforced delivery, in convulsions.

When the first stage of labor is completed, then your duty is imperative to deliver at once. Do not permit your patient to congest her brain by bearing down efforts, but apply the forceps, even at the superior strait, in all vertex cases. If the breech presents, then by the fillet, blunt hook, etc., facilitate its descent; deliver the arms and head *secundum artem*. Only resort to version in trunk presentations. If convulsions continue into the third stage of labor, or there be reason to apprehend them, then deal gently with the womb; and if it be necessary to introduce the hand for the delivery of the placenta, previously administer chloroform.

Convalescence after puerperal convulsions is usually rapidly and perfectly established. In some cases, more or less dullness of intellect remains for some time after delivery; in others, the nervous system is left in a very weak and irritable condition, and again the physical health may be slow in rallying from the shock. These sequelæ will be treated on general principles. The intellectual habitude, especially if

associated with general debility, can best be treated by some of the preparations of phosphorus alone, or combined with iron and strychnine. The following is an excellent prescription:

R \bar{y} . Strychniæ sulph.....gr. ss.
 Tinct. ferri chloridi..f $\bar{3}$ ss.
 Acid phosphoric. dil.....f $\bar{3}$ iss.

M. Fit. solut. Sig. Take 30 to 40 drops in wineglassful of sweetened water *ter die*.

The various nervines, such as bromide of potassium, hyoseyamus and camphor, opium, etc., may be demanded for the nervous system. Nutritious diet, tonics, change of air and scene, etc., may all, in certain cases, be necessary to restore the equilibrium of health.

I have thus, gentlemen, so far as my limited time would allow, discussed this disease so as to present the most important features of its etiology, pathology and treatment. That I have not exhausted the subject I am aware, but this much I can claim, that while I have made free use of the labors of others. I have taught you what I do know, by practical tests, to be true and reliable. Much, however, on this and many other subjects remains to be done by the medical men of your and succeeding generations. Your predecessors in the profession, like the inspired seer on Pisgah's mount, to whose enraptured vision were spread out the fair fields of Canaan, luxuriant with ripening harvests and verdant plains, have been denied the full possession of the noble heritage which I trust will be bequeathed to you—the possession of a science elevated in its character, its state of perfection attained, taking rank with the exact sciences, enlarging its benefits, honored by society, a blessing to humanity.

Percentage Paid by Druggists to Physicians.—We are informed by the *Pacific Medical and Surgical Journal*, February, 1880, that “a bill has been introduced in the Legislature of California, prohibiting the payment to physicians by druggists of a percentage on prescriptions, as is the custom to some extent.”

ART. III.—**Petroleum in Phthisis.*** By C. G. POLK, M. D., Philadelphia, Pa.

Crude petroleum deservedly ranks next to cod liver oil in the therapeutics of tubercular and scrofulous diseases of the respiratory apparatus.

As yet the knowledge of its properties is largely empirical—the results of clinical observations rather than of theoretical conclusions, or of hypothetical deductions. It is unquestionably an alterative; an agent which modifies molecular morphology, which impresses those functions by which the non-living is endowed with vital attributes, and by which the integrity of the nutritive fluid is maintained. Improved digestion is one of the earliest indications of its effects. It gives strength to the stomach. Food which had previously nauseated that viscus, is kindly received and promptly digested. The appetite becomes more active; inconveniences, such as gastralgia, acid eructations after eating, and heart-burn, are either dissipated or ameliorated. If the patient has been losing weight and strength, the loss is often arrested, and occasionally it is both astonishing and gratifying to witness the transition from decided emaciation to rapid recuperation—the patient losing the haggard, wan and death-like expression, exchanging it for the hue and glow of health.

Another result the author has witnessed in a large per cent. of the cases in which he has employed crude petroleum, is the prompt manner in which it lessens hectic phenomena. Patients in whom “the sunken eye is too bright, the hollow cheek too flushed, the breath too thick and heavy in its course” to leave a doubt of the impregnation of the blood with the debris of caseous tubercles, and tyromatous degeneration of inflammatory exudations, often rapidly improve. The afternoon flush no longer beautifies the cheek with the mockery of death; the elevated temperature and rapid pulse become normal; the skin no longer depletes the blood of its serum by night sweats. These are counteracted, and comfort and improved health supplant these omens of the inevitable hour.

*Extract from a forthcoming work on “Tuberculosis, Scrofulosis and Allied Disease.

In the chapter on hectic fever, the doctrine is advocated, that this complication of suppurative diseases, is but the consequence of the impregnation of the blood with the debris of broken down lung tissue. For this, petroleum is a desirable agent; it acts as an antiseptic, neutralizing or destroying the blood poison, and thus counteracting its deleterious impress upon the organism; it increases the functions of both assimilation and elimination—thus aiding in conveying to the tissues their pabulum for repair, and the excretion of the worn out elements from the system. It is impossible to find another agent so well adapted to meet the indications at every stage of this malady. Were the author compelled to select and rely upon a single therapeutical agent, he would give crude petroleum the decided preference.

Cod liver oil is highly injurious in the febrile and inflammatory stages, extending inflammation, and hastening the morbid results, favoring hæmorrhage, and only potent for mischief. Under similar circumstances, the hypophosphites are nearly as objectionable, especially the combinations of those containing iron; while petroleum is a decided antiphlogistic, quieting the excited heart, correcting the deranged condition of the capillaries, thus lessening vascular congestion, and removing the fuel of inflammation. This property of petroleum is very decidedly manifest in the benefit it confers upon the catarrhal elements of the various forms of phthisis. Frequently after trying the various anodynes to relieve a harrassing cough, without any apparent advantage, the physician will give up in despair, and conclude that it is useless to attempt its control. But if he will even then place the patient upon petroleum, he will often find that the cough is rapidly diminished, the expectoration becomes less abundant and more natural; the nights, heretofore spent in agony, bring quiet and refreshing sleep; the pain and soreness in the respiratory apparatus disappear; the lung and bronchial catarrhal symptoms are brought in abeyance, and the general amelioration is well marked. These conclusions are well sustained in the history of cases 240 to 300, and will receive a most cordial approval from all physicians familiar with the medical properties of petroleum in chronic

catarrhal diseases of the respiratory passages, and in the inflammatory complications of tubercular disease.

But while the value of petroleum in all these conditions is incontestible—while it fills a place in the therapeutics of the catarrhal conditions of tuberculosis, unfilled by any other remedy, it has no claims to the rank of a specific. Unaided, it will seldom be equal to the contest with the tubercular cachexia—unable to cope with the primordial lesions in the nutritive functions; and yet it will often supply the missing link in the chain by which human life is moored to the terrestrial shores.

Valuable as it is, as an alterative, tonic, antiseptic and expectorant, its disagreeable odor and taste are formidable obstacles to its administration. The majority of patients will accept cod liver oil as less nauseous, and many will refuse to take the petroleum unless so combined as to mask its presence. This difficulty led the author to employ various devices to obviate it. He formed an emulsion with acacia, the yolk of eggs, and sherry wine, flavored with the oil of bitter almonds, and succeeded so that the petroleum was scarcely discernible by taste or smell. It is so proportioned that each tablespoonful will contain one drachm of the petroleum. This amount should be taken four times a day, after meals and at bed time. The difficulty, however, in obtaining this emulsion properly prepared induced him to prescribe it with Loefflund's extract of malt, flavored with oil of anise or oil of sassafras. The majority of patients take petroleum in this manner without much remonstrance. In cases in which cod liver oil is not contra-indicated, the emulsion of the oil with wheat phosphates, known as "phospho-nutritive and cod liver oil," combined with the petroleum, forms a very available combination. It may be given with malt liquors to many persons without being tasted; others, with acute olfactory organs detect its presence and refuse to swallow it. By tact and perseverance, however, the caprices of most patients can be overcome.

ART. IV.—The Invention of Anæsthetic Inhalation or “Discovery of Anæsthesia.” By W. G. MORTON, M. D., New York City, N. Y.

“The invention all admired and each how he,
To be the inventor missed—so easy it seemed
Once found, which yet unfound most would have thought
Impossible.”

Millon.

That a new “discoverer of anæsthesia” has been discovered, at this late date even—that extraordinary and novel claims for him have been recently brought before the medical and general public with energy and persistency by a special advocate,* that, in short, the ether controversy, long since considered as a *res adjudicata*, has been again re-opened, forms, in itself, a sufficient apology for presenting a fresh review of the subject in a manner which shall include the claims made for this third and latest after-claimant. And whether this modern revival of a claim—never viable—will be found to be based upon an accession of new and reasonably valid proofs and facts; or whether it is a needless resurrection of long buried antiquarian remains, unwarranted by any new facts developed, is a point which will best appear upon making a plain presentation of the case.

The universal practice of anæsthesia, as it is understood to-day, began in 1846. Before this date, pain was inevitable. Mankind, in hospitals, in homes, on all occasions of pain incident to surgery and medicine, suffered without relief. After this date, pain was avoidable. Mankind was offered and accepted immunity; and every physician and surgeon in the world held in his hand the means and the method of annihilating it.

Thus, voluntary escape from pain forms an epoch in the world's history as definite and historical as the beginning of the Christian era, of vaccination, or of telegraphy—an epoch marked, moreover, by results to humanity more important and more enduring than those gained by any single contri-

*Dr. J. Marion Sims, *Virginia Medical Monthly*, May, 1877, and subsequent editions of reprints—a third change of base by the same writer, who, in 1861, following the lead of Parker, Mott, Francis, and hundreds of other distinguished physicians of this city, appended his name to the memorial stating that “for this discovery, the first great triumph of placing in the hands of the profession an agent capable of rendering the patient safely and at will utterly insensible to the stroke of the surgeon's knife—the world is indebted to Dr. W. T. G. Morton, of Boston;” who again, in 1873, said in a public address, “To my mind, it is as clear that Wells was the discoverer of anæsthesia as it is that Columbus was the discoverer of America;” and who now, in 1877, thinks “that Long was the first man to intentionally produce anæsthesia for surgical operations,” and was therefore the true discoverer of anæsthesia.

bution ever made to medicine.* The practice of surgery underwent at this date a striking revolution, brought about by the revelation of the fact that sulphuric ether, properly managed, would produce complete insensibility to the pain of surgical operations.

This revelation to the world was made by Dr. W. T. G. Morton,† of Boston; he was issuer of the new facts. At hand, stood a Bigelow,‡ with the incisive insight to welcome and counsel, and the will and the ability to sweep aside the prejudice and doubt of the hospital surgeons; and within the historic walls of the Massachusetts General Hospital were found a Warren‡ and a Hayward‡ to verify, with judicial fairness, and to place upon the revelation, verified, by the stamp of their scientific and professional approval; and a Holmes‡ suggested the terms *anæsthesia* and *anæsthetics*.

Thus issued—fostered, verified and christened—the revelation went forth into the world in 1846, perfect at the outset.

The news quickly reached Europe. Anæsthesia came into universal practice; and ether was alone in the field as an anæsthetic for more than a year, when Dr. (later, Sir) James Y. Simpson§ suggested chloroform as a substitute for it.

*"If America had contributed nothing more to the stock of human happiness than anæsthesia, the world would owe her an everlasting debt of gratitude."—*Prof. S. D. Gross*. Address delivered April, 1879.

It is probable that the American inventor of the first anæsthetic has done more for the real happiness of mankind than all the moral philosophers from Socrates to Mill.—*Lecky, History of European Morals*, vol. I, p. 88.

†Then Mr. and later Dr. Morton.

"Dear Sir,—It affords me much pleasure to inform you that at a meeting of the faculty of the Washington University at Baltimore, you were unanimously admitted to the degree of Doctor of Medicine.

THOMAS E. BOND,
Dean of the Faculty.

"Dr. W. T. G. MORTON."

‡Profs. Henry J. Bigelow, George Hayward, John C. Warren, O. W. Holmes—all of the Harvard Medical School.

Only lately, a distinguished American writer states that the word, anæsthesia, was coined and introduced into our medical nomenclature in 1847 by the late Sir James Y. Simpson. The following characteristic letter establishes the fact that the word is of American origin. Dr. Morton at first used the term *Letheon*, suggested by the fabled river Lethe to denote oblivion both to pain and consciousness, but he quickly adopted the new word:

BOSTON, November 21st, 1846.

"My Dear Sir,—Everybody wants to have a hand in a great discovery. All I will do is to give you a hint or two as to name or the names to be applied to the state produced, and the agent.

"The state should, I think, be called 'anæsthesia.' This signifies insensibility more particularly (as used by Linnaeus and Cullen) to objects of touch. The adjective will be 'Anæsthetic.' Thus, we might say, the state of anæsthesia or the anæsthetic state. The means employed would be properly called the anti-æsthetic agent. Perhaps it might be allowable to say anæsthetic agent; but this admits of a question. * * * I would have a name pretty soon, and consult some accomplished scholar, such as President Everett or Dr. Bigelow, senior, before fixing upon the terms, which will be repeated by the tongues of every civilized race of mankind. You could mention these words which I suggest for their consideration; but there may be others more appropriate and more agreeable.

"Yours respectfully,

O. W. HOLMES.

"Dr. Morton."

§In sending to Dr. Morton his first publication upon chloroform, Dr. Simpson writes:

"My Dear Sir,—I have much pleasure in offering to your kind acceptance the accompanying pamphlet."

A number of other substitutions have since been made; but have failed to supplant the original ether. And we may note, in passing, the gratifying fact that the practice of anæsthesia is wholly of American origin.

But, it may be asked, was this knowledge new to the world? Was it, in 1846, for the first time, placed in the possession of mankind? That it was, absolutely and without reservation, is established by the common consent of all eminent authorities, tracing them up to the very day, even, of Dr. Morton's first demonstration. In 1839, the distinguished surgeon, Velpeau, wrote: "To avoid pain in surgical operations is a chimera which it is not allowable to pursue at the present day. The cutting instrument and pain are two words which never present themselves singly to the mind of the patient, and of which we must necessarily admit the association." And Orfila, in his *Toxicology*, declares "absolute insensibility to pain, under surgical operations by etherization, to be a discovery entirely new."

Prof. J. C. Warren, already referred to, says: "The discovery of a mode of preventing pain in surgical operations, has been an object of strong desire among surgeons from an early period. I have freely declared that, notwithstanding the very large doses of narcotic substances, this desideratum has never been satisfactorily obtained." And again, Jan. 6, 1847, "I hereby declare and certify that I never heard of the use of sulphuric ether by inhalation as a means of preventing the pain of surgical operations until it was suggested by Dr. William T. G. Morton, in the latter part of October, 1846."

Sir Benjamin Brodie, in an address delivered at St. George's Hospital, London, in October, 1846, said: "There is no greater desideratum, either in medicine or surgery, than to have the means of allaying or preventing bodily

Later, Dr. Simpson diffused this credit over a great number of observers and experimenters, leaving the main idea ascendant that the settled and fixed views of anæsthesia, as known to-day, did not begin until 1847. The files of all the medical journals throughout all countries, published between October, 1846, and November, 1847, are sufficient refutation of this view of the case.

* * * "In the *Monthly Journal of Medical Sciences*, I have a long article on etherization, vindicating your claims over those of Jackson.

"Of course, the great thought is that of producing insensibility, and for that the world is, I think, indebted to you.

"With very great esteem for you, allow me to subscribe myself,
"Yours very faithfully,

J. Y. SIMPSON.

"Edinburgh, 19th November, 1847."

pain—not only in surgical operations, but in other cases also. But there is good reason to apprehend that it has not been reserved for the revival of animal magnetism under a new name to accomplish that *for which all physicians and surgeons have been looking in vain from the days of Hippocrates down to the present time.*”

What Brodie despaired of became an accomplished fact within twenty-four hours of the delivery of his address.

The facts thus far detailed are fixed and immutable. Not a word admits of discussion or denial; they demonstrate clearly that something novel was revealed to the world in 1846—something not yet in the possession of mankind; in themselves they are *prima facie* evidence that what was new was a discovery—the discovery of anæsthesia as applied to surgery, and that this discovery was made in 1846.

And but one man was known as author in relation to these events, and this was Dr. Morton. He it was who asked for an opportunity to administer the ether, and his hand administered it before a crowded amphitheatre of skeptical witnesses; his the responsibility of failure, and its attendant ridicule; and his the risk of an almost certain indictment for manslaughter in case of the death of any one of the patients upon whom the preliminary experiments were made which led to this public trial; and during this trying and critical period he alone was known or heard of as originator, in connection with the use of ether, until *after* its safety, efficacy and utility were established beyond a doubt. Claimant he was not; for from whom could he claim anything? No one else had said that they had discovered anæsthesia. It did not exist, or the testimony of Orfila, Brodie, Warren, and all contemporaneous and eminent authorities is false. It was not, therefore, claimable from any one. It originated there and then in 1846. At this moment it was revealed, announced, verified, introduced and popularized, and the discovery went forth to the world—issued by Morton, endorsed by the Hospital. Antiquarian exploration, prompted, whether it be by sophistical or honest partisanship, assails this position in vain; and on this basis posterity will render that verdict unanimous which promoters of confusion now seek to delay. From this elevated plane, Dr. Morton, alive, combat-

ted assaults with a forbearance not accorded to him in return, but with a persistency which was convincing of his faith in the justice of his cause; and in his grave he awaits the world's unanimous verdict of confirmation and approval.

But at this point in the history of anæsthesia, clearcut, defined and impregnable as Dr. Morton's position would seem to be, we are brought straightway to the unfortunate period of controversy—the inevitable sequel of every great discovery and invention. Numerous after-claimants arose, and bid fair yet to arise. The after-claimant, whether with good intentions or bad, seems to be the natural adjunct of the discoverer or inventor. If honest, he claims that certain prior efforts of his own were of a nature sufficiently definite to constitute the discovery or invention. And such a claim may possess a certain amount of merit, if these efforts have been put on record at the time, with proper dates, and witnessed it may be; if this has not been done, their value cannot be relied upon; for every one knows how easy a thing is to repeat after it has been once accomplished. The puzzle solved, its solution seems ridiculously simple, and each wonders how he failed to do it. But it is obviously unjust, with another's solution in hand, to interpret previous steps and attempts in the same direction. The little misstep, on this side or that, is set straight; and such an after-claimant comes conscientiously to believe—since he was so near being—that therefore he was, at this prior time, the discoverer. He forgets that while he paused on the verge, another, by chance or intent, pushed on, by the same route, perhaps, and took the final step of success. But the after-claimant ignores this final step. He substitutes his imperfect results, previously obtained, for the now perfect ones, exchanges his own uncertainties for the new certainties, and is now said to “ante-date” the unfortunate discoverer, though he cannot point to a single record, in print or writing. The injustice of this is so glaring that the scientific world has been driven to admit the law that an observer cannot claim credit for his observations unless they have been submitted to some proper scientific tribunal, and thus, at least, if not in print, become published.

The reasons for, and the elements of, every discovery soon to come, for instance, are now working in many minds. When the prospective discovery is born, each worker may believe that the discovery is his. But the world must honor some one of them; and it has always selected him whose work was coincident with the public birth of the discovery; who detected the main fact or principle involved and demonstrated its application; who issued, announced and proclaimed it, especially if he did this against difficulties and prejudices; and such issuer's position is manifold stronger, if he has had absolutely no relation personally, or in writing, or print, with the after-claimant; and if, additionally, the latter has not a scrap of published record to show for his alleged prior discovery.

But there is another kind of after-claimant, whom words cannot too strongly denounce. With nothing to lose, since he has done nothing, and everything to gain, he makes up, in audacity, what he lacks in facts. He advances his claim "with a presumption exactly proportioned to his inability to establish them." He thrives upon the confusion he creates—takes advantage of mankind's intuitive love of fair play to inspire a doubt, which the world, occupied, or perhaps indifferent, cannot at once dispel. The inventor and revealer of the anæsthesia of 1846 was to have an experience of both these classes.

But we must pause a moment at this point to ask what we mean by the "discovery of anæsthesia." The terms in themselves have been responsible for much confusion. Do they comprise the conception—the theory—an attempt to carry out the theory in practice, or the perfected and now familiar result? The word anæsthesia (from *a*, non, and *αἴσθησις*, sensation) means simply the state of insensibility to pain—an abstract and observed fact—as old, undoubtedly, as the human race. Syncope, the coma of disease, a concussion of the brain, an excess of alcohol, opium, or other narcotic, and the inhalation of noxious or other gasses—any or all of these agents or means rendered this condition familiar to the past. This was *accidental* anæsthesia. But we may go still a step further, and find that the state of insensibility to pain

brought about in human beings with a humanitarian and scientific purpose—that of relieving the pain of surgical operations—was equally familiar. This was *intentional* anæsthesia—produced both by ingestion and by inhalation. Not only allusions, expressed in the clearest terms in the writings of the older authors, but the record of the very means—the drug or the gas, and the detailed method of its employment, leave us in no doubt upon this point. Middleton, in his tragedy of “Women, beware of Women,” published in 1657, writes :

“I’ll imitate the pities of old surgeons,
To this lost limb, who, ere they show their art,
Cast one asleep, then cut the diseased part,”

But we do not intend to enter into the past literature upon the subject. A word will show how clearly both the conception and the practice of anæsthesia in surgery was understood. “It,” says Pliny, not later than A. D. 79, speaking of mandragora, “is drunk against serpents, and before cutting and puncturing, lest they should be felt.” And, according to Dioscorides, it is used to cause insensibility of those who are to be cut or cauterized. And still again, a century later, Apuleius says, “If any one is to have a member mutilated, burned or sawed, let him drink half an ounce with wine, and let him sleep till the member is cut away, without any pain or sensation.” Thus the records run on, up to our own century.

We pause for no more than a glance at attempts to establish the practice of anæsthesia, nearer in time to 1846. The modern experimenters have been many. Notably, Dauriol, Hickman, Esdaille, Haller, Deneux, Blandin, Van Fricten, Javet, Teden, Wright, Collier, Justin, Dickinson, Nicholson, Collyer, Smylie, Bowne, Long, Wells (Jackson made a suggestion of what was well known)—all these men intentionally produced anæsthesia for surgical operations*—some by one agent, some by another; most of them by inhalation, and several by the inhalation of ether vapor. Sir Humphrey Davy, in 1800, had already recognized the fact that nitrous oxide, or laughing gas, would annul pain, and suggested its

*The wording of the claim of novelty recently set up for Long.

use in surgery. The effects of ether vapor had been generally recognized as analogous to those of laughing gas; and the fact of its mitigating or annihilating pain had become common property of text-books. Nysten, in his *Dictionary of Medical Sciences*, speaks of the inhalation of ether as familiarly employed to mitigate the pains of colic, and figures an apparatus for its administration. In 1795, Dr. Richard Pearson published a pamphlet upon the subject; and later, in a work of Dr. Beddoes, published in 1796, the case of a patient is related, in which pain was relieved and sleep immediately produced by inhalation of the ether. Among American authors, the stupefying effects of the inhalation of ether were noted by Godman (1822), Mitchell (1832), Prof. Samuel Jackson (1833), Wood and Bache (1834), and Miller later.

Among the actual experimenters, some seem to have met with marked success. Dauriol specifies five cases of successful painless operations. Hickman's results, published in 1828, are remarkable. He describes a method of "suspending sensibility by the methodical introduction of certain gases into the lungs" during which "the most delicate and most dangerous operations are performed without producing pain in the individuals submitted to them."

But we forbear mentioning other equally definite results, such as were obtained by Collier, Esdaille and others. (Long, Wells and Jackson, from the special prominence given to their claims, will be considered separately.) We have brought forward enough for our present purpose. Our point is, that intentional anæsthesia for surgical purposes—whether by potion, inhalation or otherwise—was perfectly well known up to the very date of 1846, when the "discovery of anæsthesia" burst upon the world, and was hailed as its greatest boon. But what then did 1846 give the world new? Why did this date from an epoch in surgery? In the answer lies the definition of the "discovery." It was simply that the familiar fact took upon itself a new and living form; that what was unreal and delusive became real; what was impracticable became practicable and available. The year 1846 gave to the world a practice—a mode of procedure for annulling the pain of

surgical operations—a method so clearly defined and so definite in character that others could be taught to repeat it.

And this gift was an art, according to the definition of the term by the highest authorities; for art implies performance, practice; while the science signifies the underlying principles involved. The practice of music is an art; its theory a science; the sailing of ships the art, the fundamental principles involved, the science of navigation; the method of annulling pain for surgery, the art, the fact so long familiar to the world, viz., that the entrance of certain substances into the blood would produce insensibility to pain, the science of anæsthesia. The year 1846, then, gave to the world the art of anæsthetic inhalation.

And wherein lay the novelty of this art? As we have seen, the past teems with attempts to establish it. What was new consisted (a) in the perfect demonstration of the hitherto imperfectly demonstrated anæsthetic properties inherent in ether; (b) demonstration that this property of producing complete insensibility to pain was applicable to surgery; and (c) demonstration of these two points to the satisfaction of experts (physicians) and the public—a triple success, involving proof of the full power of ether—proof of its applicability to surgery, and proof of this to the world. Thus, public demonstration or proof of the full power and the safe application of ether established universal anæsthetic inhalation. The “discovery” was simply success in demonstrating what others had failed to demonstrate. And this triple proof—this demonstration of a new mode of procedure and its universal application to the needs of surgery—constitutes in itself all the novelty that can ever be claimed in connection with the “discovery of anæsthesia.” “He alone discovers who proves,” says Dr. Paley. “He,” says Sidney Smith, “is not the inventor who first *says* the thing, but he who says it so long, so loudly and so clearly that he compels mankind to hear him.” And again, Goethe says: “He is the inventor who generalizes the single instance, and who makes the world concede that it is thus generalized.” “He is the first inventor in the sense of the act,” writes Chief Justice Story, our highest authority upon the subject, “who has first perfected and adapted the same to use.” In a race of diligence

between two independent inventors, he who first reduced his invention to a fixed, positive and practical form, would seem to be entitled to a priority of right to a patent therefor."

And this art was an invention rather than a discovery. To discover is to make known what has before existed. The expansive force of steam, the pressure of the atmosphere, galvanism, a new star—these were discoveries. The discoverer in these instances found out and made known previously existing facts. He who first noted that certain agents now called anæsthetic would produce insensibility to pain, was the true "discoverer of anæsthesia." Unfortunately, we can never determine who first noted and made known this fact. As we have seen, it is as old as historical times. But the practice and the performance of annulling pain for surgical purposes—of doing this at will and repeatedly—*i. e.* the system, the mode of procedure, the art of anæsthetic inhalation as practised to-day was new in 1846. No such mode of procedure had ever before become established. It had not previously existed, it was a new creation. It owed its birth to the workability, if we may use the word, of the system. Never up to that moment had it been in such form that others, to use the words of Judge Story, were able "to produce precisely the result described, by using the means specified, without any addition to or subtraction from them." The new mode of procedure was therefore an invention—the invention of anæsthetic inhalation.

Who, then, was the inventor—inventor and revealer? First in the field was Dr. Charles T. Jackson, a chemist of Boston, who based a claim to the whole discovery upon an alleged suggestion to "try ether," and upon an alleged previous knowledge of its property of producing insensibility, gained in 1842. Then came Horace Wells, of Hartford, who, in his first publication, made three months after the Boston announcement, claimed that he had produced insensibility to pain in "twelve or fifteen" cases of extraction of teeth in 1844. And in 1849 appeared a communication to a medical journal,* from Dr. Crawford W. Long, of Georgia, stating that he had used ether to produce insensibility three times

**Southern Medical and Surgical Journal*, Dec., 1849.

in 1842, once in 1843, and once in 1845—none of these three, be it noted, ever having previously written or printed a word upon the subject.

It is this latter after-claim which has been again presented to the medical and general public. Its present status, indeed, is due to the reflected light derived from its modern advocate and exponent rather than to its intrinsic worth. On its own merits, it had already been presented to the scientific world in 1849, weighed and found wanting in any single point of novelty, and had long remained unnoticed and forgotten. And nothing new has since come to light. We have therefore merely a new version of the original.

There are also other less prominent after-claimants. They are Drs. Esdaille, Collyer, Smilie, Bowne, Justine, Dickinson, Nicholson, etc.

Of Jackson and Wells' claims, we need say but a few words. Jackson's casual reply to a question, which he afterwards magnified into a suggestion, comprises nothing novel; it had been many years in print; several men had tried ether, and it stood on record that its use was dangerous to life. As Brodie said when the discovery was announced, "I have heard of this before. I have tried it on Guinea pigs and it killed. The question is, is it safe?" And Dr. Morton proved, by several distinguished witnesses, that at the time of this suggestion, he had been buying sulphuric ether in large quantities during the three preceding months, and had moreover questioned other authorities (Metcalf and Wightman) besides Jackson. But why did Dr. Jackson himself not "try ether?" Here, at least, would have been a slight advance, even if he failed in the trial. To meet this objection, he relates an experience occurring four years previously, in 1842, when he inhaled vapor to allay the irritation caused by the inhalation of chlorine gas. Here, again, there was nothing new. Pereira, in his famous work, then as now a familiar text-book, states, "the vapor of ether is inhaled" * * * "to relieve the effects caused by the accidental inhalation of chlorine gas."* But Jackson says he became insensible to external impression. Pereira writes, "*If the air be too strongly impregnated with ether, stupefaction ensues.*" But at this

* *Elements of Materia Medica, etc.* London, 1839. Quoted from Prof. H. J. Bigelow.

point Jackson takes a great leap. He says he drew the inference that a surgical operation could be performed upon a person while in this condition. Well, perhaps he did draw this inference, though one can't help regretting that he did not say so before his inference was proved to be a certainty in 1846. I may infer that it is going to rain to-morrow; but it may not rain. If I wait till it rains to state my inference, I am not a little ridiculous. And after all, an inference is no more than a theory—a guess; it needs demonstration—proof—before it becomes knowledge. Every recorded experimenter in the past—and as we know, they were many—was possessed of this inference, and this, too, more strongly than Jackson was; for each acted upon his inference, theory or guess, and attempted to produce surgical anæsthesia. Thus Jackson's claim is clearly based upon an hypothesis—a supposition—and that not one original with himself, nor ever made the subject of a demonstration by him. Not only had he never performed an experiment with the view of annihilating pain for a surgical operation (the inhalation of ether as prescribed by Pereira as an antidote to the fumes of chlorine gas can scarcely be claimed as such) upon himself, upon any one else, or upon an animal, but also he had never even witnessed an operation until a month after anæsthesia left the Massachusetts General Hospital as a perfect and demonstrated fact. A week after this test operation at the hospital, he was thus interrogated, by the Hon. Caleb Eddy: "Dr. Jackson, did you know at such time (October 16th) that after a person had inhaled ether, and was asleep, his flesh could be cut with a knife without his experiencing any pain?" He replied, "No, nor Morton either; he is a reckless man for using it as he has; the chance is he will kill somebody yet." And the Hon. Edward Warren states, that at about the same time, Dr. Jackson told him that "the new use of ether was dangerous," etc., "and would, he feared, be attended with fatal consequences; and that he (Dr. Jackson) was not answerable for the result; and that therefore he would refer me to Dr. Morton for further information." This was after Morton's demonstration at the hospital. Therefore, what Morton and the world *knew*, Dr. Jackson, as shown by sworn testimony, declared he did not know; in fact, he denounced it

as unsafe in strong language. But Dr. Jackson was equal to the occasion. The discovery assumed an unexpected magnitude, and his ingenuity grew apace. He now stated that Dr. Morton had made all his experiments under his instruction, that he acted simply the part of a "nurse," and that therefore on the grounds that "*qui facit per aliam, facit per se*," he alone deserved the credit. This claim was too atrocious to receive credit here in America where the facts were known; but submitted on the as yet unimpeached authority of Jackson, to the French Academy of Sciences, this preposterous claim found, in the absence of denial and the presence of a warm personal friend and advocate, a wide credence, whose influence is yet felt, not only in Europe, but also by reflection, here in America.

The conversations with Warren and Eddy above quoted, in themselves disprove that there was any harmony of action between Jackson and Morton. He denounced Morton and disclaimed any connection with his use of ether. There is not a scintilla of evidence to prove that Morton worked under Jackson's directions. On the contrary, it is proven by a most overwhelming mass of evidence to be a baseless assertion. Later, when the subject of a patent was mooted, Dr. Jackson's name was inserted in it, in deference to his strenuous claims, and to secure him the payment of the five hundred dollars which he charged for his unnecessary piece of advice when he said "try ether." Of this patent we will speak later.

We will take less time with Dr. Wells' claim. He advanced upon the hypothesis of Jackson—the hypothesis in fact of the long line of experimenters, both ancient and modern, but most clearly expressed by Sir Humphrey Davy in 1800—and made the attempt to establish a method of painless surgery. His first statement was, that he had used nitrous oxide gas in "twelve or fifteen" cases of extraction of teeth in 1844. We will not enter into particulars. The final answer to him is that he established nothing, and left nothing behind him as a result of his experiments. More than this, he himself absolutely abandoned his researches for two years, or until the events of 1846 reminded him of what he

had lost. And when at this date Dr. Morton wrote him of his success, instead of replying, as the true discoverer would have done, "But, Dr. Morton, there is nothing new in what you write. I myself found this out two years ago," he writes, "If the operation of administering the gas is not attended with too much trouble, and *will produce the effect you state*," etc. Now, the "effect" Dr. Morton stated was exactly what Dr. Wells saw fit some months later to claim as his discovery. This letter, still preserved, is in itself fatal to Wells' claims. Many, in short, had used anæsthetics as effectually as Wells did in 1844, and following Wells no one used anæsthetics in 1845.

There remains a single point which needs a little clearing up. So vividly was Dr. Wells impressed with the idea that the long sought for anæsthesia could be made practicable, that he went to Boston in 1844, and administered his nitrous oxide to a patient at this same Massachusetts General Hospital. This was a bold step, and deserved success. But the patient screamed with pain at the first touch of the knife, and Wells returned in disappointment to Hartford, abandoned the subject, and went into other business. But to-day anæsthesia by nitrous oxide gas is a simple and available process. In Wells' hands at this test experiment it was not. With his apparatus and limited amount of gas, he was forced to fail, and under the circumstances he would fail to-day. Wells himself seems never to have been able to produce the nitrous oxide anæsthesia of to-day. It is not very generally known that after 1846, when all the world rang with the praises of ether, Wells made many futile efforts to produce anæsthesia with the gas, hoping thereby to supplant ether. In 1847, he repeated the Boston experiment in the amphitheatre of the New York Hospital, before distinguished physicians and surgeons, among whom were Mott, Francis, Parker, Van Buren and others; and notwithstanding that he now possessed all the established experience of the ether anæsthesia, again absolutely failed. If he produced anæsthesia in 1844, he could have repeated it in 1847. Here are two well attested public failures, proving that nitrous oxide anæsthesia, as Wells understood it, did not work. How, then, reconcile the success of to-day with the failure of 1844—

'47? The explanation is simple, nitrous oxide anæsthesia did not begin until 1863; the process, as now known, came into practice then. And the step from failure to success was a short but vital one. It had already been pointed out in 1848.* It was the substitution of the large gas bag—the large volume of gas, for the small gas bag, and deficient supply used by Wells. Wells did not give enough gas. Whatever credit may be due to his intentions, it would be manifestly unjust to accord to him a success which he never attained. Nitrous oxide to-day and since 1863, produces anæsthesia, but it never did this in the hands of Wells.

As against the claims of Jackson and Wells, a cumulative mass of decisions have been given in favor of Morton. In our own country, where there is no ultimate scientific tribunal of appeal, such decisions are of great value. The Board of Trustees of the Massachusetts General Hospital, composed of distinguished citizens familiar with every detail of the controversy, to whom Jackson was well known, and Morton unknown, decided with one voice, in favor of Morton in 1848; and subsequently in 1849, after reviewing their decision at the request of Jackson, unanimously confirmed it. This decision, rendered as it was by a competent "jury of the vicinage," should be final. Further, no less than six† committees of the United States Congress have unqualifiedly affirmed the justice and the validity of Dr. Morton's title of the real discoverer or inventor. But legislation upon the reports of committees when they were presented to Congress was obstructed in each instance by partisans of one after-claimant or the other. At last, two more committees on different occasions reported simply "to grant relief generally," the bill being thus worded at Dr. Morton's request, in order that after-claimants should submit their claims to judicial investigation and verdict. This invitation they never could be brought to accept; they courted darkness, not light.

Additionally, Dr. Morton has been sustained by the almost unanimous attestation of the Medical Faculties of Boston,

*The credit of substituting a large and efficient volume of gas for the usual small supply of the "traditional exhilarating gas bag," is due to Prof. Henry J. Bigelow, of Boston, who in a breast excision performed at the Massachusetts General Hospital, April, 1848, used successfully about sixty gallons of the gas.

†Report of Select Committee H. R. 30th Congress, 2d Session; Ditto Naval Com., H. R. 32d Cong.; Ditto Military Com., Senate 32d Cong.; Ditto Naval Com., Senate 32d Cong.; Ditto Select Com., H. R. 32d Cong., 1st Session; Ditto Military Com., Senate 37th Cong., 3d Session.

New York, Philadelphia, and other cities; and by the great mass of the medical profession generally; by a host of eminent men of science and letters; by the chief authorities of the National Government, and by institutions of learning in America and Europe. Soon after the announcement of 1846, the French Academy of Arts and Sciences, to which Dr. Morton's case was scarcely presented, while Dr. Jackson's was engineered by a personal friend and member, made a mutual award to Jackson for the observation, and to Morton for the application. Could the Academy repeat its investigation at this day, it would find it difficult to locate the observation that ether might produce insensibility to pain. Before Jackson, this observation had been made and recorded by Townsend, Nysten, Pereira, Orfila, Godman, Mitchel, Prof. Samuel Jackson, Wood and Bache, and others. And unlike these observations, Jackson's was an afterthought; his inference had never been recorded until it was no longer an inference. If the credit lies in the observation, it certainly does not belong to Jackson; the application of this observation was the only novel thing about the discovery, and for that the Academy credited Morton. Much as Morton was honored by this award—since the vital point was granted to him, he refused to accept any decision in which his name was joined with Jackson's, and finally after two years delay, the Academy forwarded to him the Montyon prize, in the form of a gold medal. At this stage, in a *resumé* of the history of anæsthesia, the patent taken out chronologically belongs.

Much unkind language has been used about this patent—it has been the weightiest weapon of attack possessed by after-claimants. No opportunity has been lost to bring it forward in a manner derogatory to Dr. Morton, as a "secret remedy"—the Letheon, "a patented compound," etc. In the first place, this proves nothing against Dr. Morton's title to discovery; on the contrary, it is the strongest point in his favor that the Government, counseled by such men as Webster, Choate and Curtis, and after much deliberation, granted him a patent. And it is untrue to speak of the patent as implying a "secret remedy." The very word, from *pateo*, to open, signifies the opposite of secrecy; letters patent give

certain privileges to the holder, but are open to the inspection of every one. There was no secrecy about the ether patent. The agent, ether, and the various steps necessary to its successful application to the alleviation of pain, as then known, were specifically detailed. The patent did not imply secrecy, but protection to a citizen for the product of his brain. And "Letheon" was probably as good a name for an agent applied to the process of producing oblivion as one would suggest to-day for the same process, did it now arise—quite as expressive as *Anæsthetic*, now applied to the same class of agents, or as *Nepenthe*, an older term. When one recalls the great fact that in the anæsthesia of 1846, surgery and medicine secured an ally which more than doubled their usefulness—that, in fact, a world got relief from pain, it seems somewhat hypercritical to elevate into importance the side issue of a patent.

And after all, this matter of patent is simply a question of medical ethics. It may be looked at in two lights—the one as regards the medical profession—the other as regards the Government who granted it. As regards the former, it was an unfortunate mistake. It created at first in medical circles a prejudice against the invention—not because the remedy was secret, for the veil of secrecy was instantly dropped so soon as Dr. Morton was sure of its success, and of its not being pirated from him*—but because it is against the accepted "code of medical ethics" to patent anything. This profession, it is said, gives its labors, its time, its brains to humanity; and so it does, to a certain extent, and it is to its honor that it does. But extremes of sentiment are not always borne out in practice. Physicians are paid for their services, when those benefitted can afford to pay; and certainly the world could afford to pay for its greatest boon; the world is not a poor patient. But, again, physicians do take out certain patents—those who set their knowledge down in books, copyright their works—are paid for the product of their brains, and are protected in an exclusive right to the results of their labor. This is no less than a patent.

But after all, discussion upon this point as regards Dr. Morton, is neither here nor there, for at the time of the dis-

*How necessary his caution, later events verify.

covery he was not a member of the medical profession,* and was not, therefore, amenable to its code of ethics; he was an experimenter, and entitled to different views. His real intention was to protect his invention during its infancy, to keep it within control until its use was established, to publicly verify his right to it, and naturally to derive some profit from the gift of what was his own to give. In many respects, it was really fortunate that the application of the ether at the outset was protected by a patent. At the time of its announcement, its marvelous power was discredited—it was inhaled from an instrument then considered essential to success. Many, even under skillful direction, failed to carry the inhalation further than the intoxicating stage;† and had its use become instantly general before its limits, its danger and its character had been fully tested by scientific authorities, there is but little doubt but that some accident occurring in ignorant and unskillful hands would, for the time, at least, have debarred the world from its use.

But as against the Government the case is a remarkable one. There is no question of taste and propriety here. If Dr. Morton violated the code of medical ethics—an artificial code at best—in taking out a patent, the Government which gave the patent violated the very soul of ethics, which is honesty; struck at the root of all ethics, by itself using without any repayment the article and its application, the process, whose exclusive control and ownership it had guaranteed on its honor to patentee. The Government, during fourteen years (the term for which the patent was issued), stultified its own acts of protection. What citizen after that would respect the rights of the inventor? That Republics are ungrateful is a trite phrase; that a Republic can also be dishonest remained for our own Government to demonstrate in its unhesitating violation of a patent which it had given after due deliberation to one of its own citizens. But it has been urged in favor of the Government that the dimensions of such an invention were of too great magnitude to be the subject of a patent—that it was like patenting the air we breathe, the

*The degree of Doctor of Medicine was conferred upon him in 1849.

†“I placed some sulphuric ether in the instrument, and gave it to a gentleman to inhale; the effect was to cause him to laugh heartily, but there was nothing like sleep. What should be done in such a case?” Extract from a letter from a well known physician of Philadelphia, dated November 12th, 1846.

water we drink; and that therefore they were justified in disregarding their guaranteed protection and using it themselves. If the Government were called upon to pay full value for what it received, this argument would hold good, for the payment of such a price would be impracticable; but it was asked to pay a reasonable sum, and it paid nothing. The discovery had both an immeasurable and a compromise value, and this latter an honest debtor could pay. It is a curious anomaly that reward should be in inverse ratio to the magnitude of the service; surely such service could receive some if not a commensurate reward.

We now come to what has been termed a foot-note to the ether controversy—an addendum dating mainly from a publication made in 1877.

It seems that among other after-claimants one, an estimable physician of Georgia, Dr. Crawford W. Long, woke up to the fact only so late as 1849, three years after anæsthetic inhalation by ether had been in universal practice, that it would be well to record in some medical journal the statement that he had “used sulphuric ether by inhalation in surgical operations on several occasions” (as many as five in the course of as many years) prior to 1846. He accordingly, in December, 1849, published “an account of the first use of sulphuric ether by inhalation as an anæsthetic in surgical operations.” This communication, tardy as it was, Dr. Long very properly made, in simple justice to himself. No special attention was paid to it, for reasons which will soon become apparent. He seems, indeed, merely to have desired to place himself on record—this in 1849. And now, in 1877, this forgotten record is dragged from its obscurity, and amplified and adorned into a patent of discovery.

The interests of truth will be best served by referring back to Dr. Long’s original text. We shall there find opportunity for comment upon this quixotic revival.

“For nearly three years,” writes Dr. Long, in his first public utterance upon the subject of anæsthesia, “the various medical journals have contained numerous articles on the employment of sulphuric ether by inhalation,” etc. This is Dr. Long’s first appearance upon the stage. He had up to this moment contributed none of these “numerous articles.”

The process of anæsthetic inhalation—anæsthesia—had sprung into life and reached its perfect growth through no word or effort of his. No one had yet heard of him. He had not, therefore, contributed in the minutest degree to the revelation, hailed with delight and adopted into practice in 1846. His claim, such as it is, must stand or fall by itself. He was an isolated observer, isolated from the world, and isolated as regards Morton, Wells or Jackson. Neither he nor his experiments were known to any of these then. He had neither directly nor indirectly any communication with them. There is, in his case, no question of mutual acquaintance, suggestion and the like. And yet we are told by a distinguished Georgian Senator, on the occasion of recent legislative proceedings, that "it was reserved for one of our own fellow-citizens," * * * "to confer not only a signal triumph upon Georgia, but a blessing upon the human race, which is beyond the power of language to express, or the imagination to conceive." But "the human race" never heard of Dr. Long until it had enjoyed exemption from pain for three years.

How little information Dr. Long had conferred upon the subject of inhalation of ether, in the South, may be gathered from the comments of the leading medical journal of a neighboring State (the *New Orleans Medical and Surgical Journal*), which upon the January following the Boston announcement wrote: "That the leading surgeons of Boston could be captivated by such an invention excites our amazement." "Why, mesmerism, which is repudiated by the savans of Boston, has done a thousand times greater wonders." "What shall we hear next?" It is certain, then, that Dr. Long had no share in the events of 1846, the acknowledged beginning of the era of painless surgery. What, then, did he do?

The whole Long claim resolves itself into two parts—the one what Long says of himself, the other what Dr. Sims says of him; and we shall endeavor to prove that the former is no basis at all for a claim to discovery, and that the latter is a claim built up from nothing.

Dr. Long states that "he was the first to use ether as an anæsthetic in a surgical operation," and this in 1842, adding then in detail the five instances in which he had "used" it (three times in 1842, once in 1843, and once in 1845). Dr.

Sims states that Dr. Long "was the first man to intentionally produce anæsthesia for surgical operations, and that this was done with sulphuric ether in 1842." The one states his "use" of ether, and later on confesses that he failed to produce anæsthesia; the other maintains that anæsthesia was produced—two claims as different as black and white; for the first constitutes failure, the second success. We shall soon see that the one expressed his claim correctly—that the other has made an unjustifiable assertion. Dr. Long, in his own words, shall prove that Dr. Sims has made a false deduction.

Now, naturally arises the question of what Dr. Long meant by the "use" of ether. This word is a misleading element in his claim. That he used ether—that he gave it by inhalation—this much, of course, is admitted. But what was the result? Mere use is inadequate to constitute discovery or intention. The past teems, as we know, with records of attempts to produce insensibility to the pain of surgical operations—whether with this gas or vapor, or that, makes little or no difference. And sulphuric ether by inhalation had already been used for this purpose. Wright, as early as 1829, records it as an habitual practice of his to give ether by inhalation in a surgical operation upon the ear.* Men used steam to propel boats before Fulton; electricity to convey messages before Morse; vaccine virus to arrest small-pox before Jenner;† and ether to annul pain before Morton. And because to-day men use balloons, shall the coming inventor of aerial navigation be shorn of the credit by any one of the present balloonists? The vital point is, how and in what manner did Long use ether? did he use it successfully? did he produce insensibility to pain—anæsthesia as we know it to-day—the anæsthesia that convinced the hospital surgeons and the world? Did he advance upon the attempts of the past? Did he uncover a hitherto unobserved fact or law, *i. e.*, discover anything? Did he combine well known facts or laws into a new mode of procedure, *i. e.*, invent anything? Did he himself believe in his experiments, or did he abandon them? Did he find any follower? Did any one else use

**Medical Record*, New York, August 2d, 1879, communication by Dr. Samuel Sexton.

†Benjamin Jesty is claimed to have vaccinated his wife and two sons in 1774, twenty-two years before Jenner introduced vaccination. Dr. Thomas F. Wood, *North Carolina Medical Journal*, October, 1879.

ether because he used it? Is the world under obligation to him for any single item of information?

All these questions we shall answer adversely to Dr. Long, and in such terms that they cannot be denied; for our answer shall be obtained from Dr. Long himself—"out of his own mouth shall he be convicted." We are brought to the very pith of his case in presenting a quotation in his own words—words which confine a claim for him to mere use of ether, in itself unnovel, and which constitute a confession; for it can be termed nothing else, that this use of ether did not produce the condition of anæsthesia known to day, and since 1846—a condition certain to occur when wanted, capable of repetition by others; complete in its effects and safe—an anæsthesia, in short, available to the needs of surgery.

"He discovers who proves," we may again quote from Paley; but of the three proofs essential to the establishment of practical anæsthesia, proof of the full capabilities of ether, proof that these were applicable to surgery, and proof of this to physicians and the world. Dr. Long did not accomplish even the first. On no occasion did he, on his own confession, produce the complete anæsthetic effects of ether; he experimented and failed; he proved nothing new; established nothing; gave nothing to the world. In summing up the communication of 1849, referred to, he writes: "*The result of my second experiment in etherization was such as led me to believe that the anæsthetic state was of such short duration that ether would only be applicable in cases in which its effect could be kept up by constant inhalation during the time of the performance of the operation. Under this impression, up to January, 1847, I had not used ether in but one case in extracting teeth, and thus deprived myself of experimenting in the only class of cases which are of frequent occurrence in a country practice.*" Now, in the first place, the remarkable admissions contained in this sentence would be valueless if any subsequent experiment had taught Dr. Long more than he here enunciates. But he never of himself learned more than this; for he distinctly states, that he "was under the impression" embodied in this quotation until January, 1847—three months after the announcement of universal and practical anæsthesia in 1846.

What was Dr. Long's impression? What was the exact

condition in 1842, which, seen through the glasses of 1846, he names anæsthesia? Dr. Long arrived at the conclusion that the anæsthetic state was of such short duration that ether would only be applicable in cases in which its effects could be kept up by constant inhalation during the time of the performance of the operation"—a state in fact so short in duration as to cause him, as he says in the next breath, "to deprive himself" of experimenting in the extraction of teeth, the simplest and most accessible of cases which occur in a country practice. Now, the extraction of a tooth is a very short operation. Dr. Long's "anæsthetic state" must have been over in a twinkling. If it did not last long enough for tooth-pulling, it would hardly do for surgery. This is the condition of affairs which Dr. Long dignifies with the title of anæsthesia; it was easy enough in 1849 to apply the then familiarized to this crude "state," occurring in 1842—to write upon the barren tablets of the past the records of the present, teeming with new and fruitful demonstrations. But the anæsthetic state of to-day, and since 1846, is of long duration—as long as the surgeon chooses to make it. In Dr. Long's experiments it was short; but why short? Evidently because he found "constant inhalation," *i. e.*, constant breathing of the vapor impossible. If this had been possible to him, he would have resorted to it. There was no more difficulty in 1842, than there is to-day, in producing an anæsthetic state of long duration, if Long had known that this could be done. Why limit his cases to a minimum, deprive himself of experimenting in such simple cases as tooth-pulling, if constant inhalation were possible to him. Clearly, he did not know this. Erase at this moment from the tablet of human knowledge all that was taught and learned of anæsthesia in 1846, all that is known of anæsthesia to-day, and let the reader place himself in Dr. Long's place, let him repeat in the hospitals of the land Dr. Long's process, without taking from or adding to it; let him produce with ether an "anæsthetic state of short duration" incapable of maintenance by constant inhalation—a condition so transitory, so inapplicable as to cause the experimenter himself to deprive himself of its use in the very simplest of minor operations which were constantly at hand; and we submit that this is

an inadequate basis on which to rest a claim to being an inventor or discoverer. There was something wrong—something unsuccessful about such a process as Dr. Long describes. It does not express what ether is capable of—does not constitute the anæsthesia of to-day as known and practised all over the world—a state of long duration, prolonged at the operator's will, by constant inhalation and applicable to all cases. Can it be believed that by this process a single capital operation could be performed? Dr. Long had never tried ether in such an operation, and more, refused to continue it in minor operations. Repeat his process to-day, and no doubt some ready mind would take the ether in hand, prolong the inhalation, and cause *forced* anæsthesia. But Long did not do this. Willhite did it accidentally—Long never. Indeed, his process was not anæsthesia at all, as we shall soon see; it was failure.

It becomes interesting at this point to know why Dr. Long failed; why he deprived himself of further minor operations, and why he abandoned his experiments. We shall find the explanation of this equally explicitly narrated, though in a light, as is natural, none too unfavorable to the narrator. Let us look more closely at this second experiment which impressed Dr. Long so vividly over the whole period of time (1842—1847), during which there is a chance for a claim for originality—this experiment which, as he confesses, embodies his whole knowledge upon ether inhalation.

Venable, the subject of it, was an expert in breathing ether. He says, "the young men of Jefferson and the adjoining counties were in the habit of inhaling ether for its exhilarating powers, and I inhaled it myself frequently for that purpose, and was very fond of its use," *i. e.*, he administered it to himself. "Ether frolics" seem to have been very common at this time in Georgia as well as elsewhere. Dr. Long and Venable often participated in them; and the former describes how they originated in his vicinity. "The subject of the inhalation of nitrous oxide gas was introduced in a company of young men, * * * and several desired me to prepare some for their use." I informed them that I had a medicine (sulphuric ether) which would produce equally exhilarating effects." There was nothing novel in this. The similarly

exhilarating properties of nitrous oxide and ether were stated in the text-books of the time, and had been tested in most of the medical schools of the land.

But Venable and Long agreed between themselves ("had some conversation about the probability that the tumors, small wens upon the neck, might be cut out while one was under the influence of ether, without my experiencing pain") to test the point as to whether ether would annul pain. There was nothing novel in this. This attempt had been made at frequent intervals since the beginning of historical times—it had, moreover, been accomplished with considerable success by the use of ether. But we will proceed slowly. We must know who is giving the ether. Of the first operation, Venable deposes under oath. "I commenced inhaling the vapor before the operation commenced and continued it until the operation was over." Then Venable kept his eye on the whole affair—knew just what was going on; otherwise, how could he know and swear to it, that he continued the inhalation until the operation was over. And of the second, he says, "In this operation *I* stopped inhaling the ether before the operation was finished." "I inhaled the ether in both cases from a towel, which was the common method of taking it." And Dr. Long says of the same experiment: "The patient continued to inhale ether during the time of the operation." Now, surely Venable administered the ether to himself, and remained conscious all the time. And Dr. Long recognizes that his patient retained consciousness; for speaking of this same crucial second experiment, he says: "In this operation the inhalation ceased before the first incision was made; since that time" (up to January, 1847) "*I have invariably desired patients*" (three more during three years), "*when practicable, to continue its inhalation during the time of the operation.*" This instruction implies co operation in the process on the part of the patient. It is just such an instruction as would be given to a person administering ether to himself. Addressed to the etherized and unconscious patient of to-day, it would be ridiculous. This point as to whose hand administered the ether is studiously left in doubt; but we see that it must have been Venable's. And we now, for the first time, understand clearly why the "anæsthetic state"

was of "short duration"—why "constant inhalation" was impracticable. Venable was administering the ether to himself, and Dr. Long did not know that there was any other method of giving it. No wonder that under these circumstances the state was brief, evanescent and incomplete—it would be equally so to-day.

But now comes the damnable point of this second experiment. *The patient felt pain.* This both Long and Venable confess. Dr. Long says the patient "exhibited signs of slight suffering, but asserted after the operation was over that the sensation of pain was so slight as scarcely to be perceived." Venable says, "I felt a little pain." Here, then, is positive failure. Dr. Long's anæsthetic state of short duration was nothing more nor less than the fleeting numbness often associated with the first or intoxicating stage of the complete anæsthesia of to-day—sufficient sometimes for the superficial cut of a minor operation. It may even have been the "primary anæsthesia," recognized a few years by Dr. John H. Packard.* Certainly Long could not have performed a capital or prolonged operation; his state was not the familiar stupor of to-day—an utter annihilation of both consciousness and pain. It was, as we have said, simply a momentary peripheral numbness of the skin, then, as now, inadequate, as Long found it, for the extraction of teeth even—much more so for the painless extraction of a wen from Venable's neck.

But why did Dr. Long not take the towel into his own hand and force the ether? Why not make the patient insensible to pain if he knew that this could be done? Why not give more ether and make the "state" of long duration? He neither knew that this was possible, nor dared to do it. He thought that the ether was only applicable in cases in which its effects could be kept up by constant inhalation. Why was Venable's such a case? *All* cases are such, but Long did not recognize that *any* were such. Knowing what medicine knows to day, how wonderful this halting of Long—this pause at a most critical moment on the very threshold of discovery! So nicely balanced is the situation, that it almost seemed as if he would topple over into discovery; but he falls the other way. It seems almost inexplicable that he

**American Journal Medical Sciences*, 1877. "On the First Insensibility from the Inhalation of Sulphuric Ether." Proceedings of the New York Therapeutical Society.

did not seize the towel, force the anæsthesia to the state of stupor, perform the operation, and proclaim the discovery to the world. In doing this, he would have at least proved the inherent power of ether as we now know it. But he failed in the very first step of progression to a perfect invention. Naturally, no other step followed, and this barren experiment remained meaningless to Dr. Long, and unknown to the world, except as an after-thought. Place Long, with his process, as he himself describes it in his hand, in Morton's position in 1846, in a crowded amphitheatre of skeptical witnesses, and can any one believe that he would have been greeted as the "discoverer of anæsthesia?"

It now only remains to show that the world got no knowledge of anæsthesia from Dr. Long—this, too, on his own admission. He writes: "While continuously experimenting with ether as cases occurred" (there were intervals of more than a year between some of his five cases), "with a view of fully testing its anæsthetic powers and its applicability to severe as well as minor surgical operations." ("I had no opportunity of experimenting with it in a capital operation.")* "Others more favorably situated, engaged in similar experiments, and consequently *the publication of etherization did not bide my time.*" We have proved, beyond a doubt, that Dr. Long never produced a true state of anæsthesia, and now we have the proof that he never made any of his knowledge, such as it was, public. Dr. Long then gave the world absolutely nothing—"the publication of etherization did not bide his time." He had not yet "fully tested the anæsthetic powers" of ether. At the rate of an average of one case a year of the kind he has described, how long would the world be in getting possession of anæsthesia? And yet the Legislature of Georgia has declared that he is "a world's benefactor," and on this ground has selected Dr. Long as one of its two representative Georgians who are to be placed in the National Picture Gallery at Washington.

May we modestly ask how the world was benefited? Dr. Long leaves us in doubt as to why he made no publication. Not only had he not fully tested the anæsthetic powers of ether, but he was by no means certain that his "anæsthetic

*Quotation in brackets, taken from another place.

state" was due to ether. He writes: "The question will no doubt occur, Why did I not publish the results of my experiments in etherization soon after they were made? I was anxious, before making any publication, to try etherization in a sufficient number of cases to fully satisfy my mind that anæsthesia (*sic*) was produced by the ether, and was not the effect of the imagination, or owing to any peculiar insusceptibility to pain in the persons experimented on. At the time I was experimenting with ether, there were physicians, 'high in authority,' who were advocates of mesmerism, and recommended the induction of the mesmeric state as adequate to prevent pain in surgical operations." Here we have the whole story. We have pointed out that Dr. Long's method in itself could not have produced a true anæsthesia; we know, on his own admission and his patients', that it did not do so; and Dr. Long himself now tells us that he did not know exactly what the "state" was—that he was uncertain about the true nature of his results. He was uncertain whether the "effects" obtained were due to imagination or idiosyncrasy of the patient, to mesmeric influence, or to ether; and he never learned more than this until informed by the "numerous articles" published after 1846. No wonder he did not publish his five experiments to the world—that, at his rate of progress, the "publication of etherization did not bide his time." This was an "ether frolic," and not the earnest anæsthesia of 1846 and of to-day.*

This, then, was Dr. Long's "use" of ether—an after-thought recital of five scattered experiments—unnovel in their scope, unappreciated and abandoned by their author, unpublished to the world, unrecognized by any scientific authority, fruitless in their results, and not connected by the slenderest thread to the beginning of practical anæsthesia in 1846. In short, as far as anæsthesia is concerned, Dr. Long need never have drawn breath.

Such is what Dr. Long says of himself. We now come to the second part of the Long claim—what Dr. Sims says of him. And we take up at once Dr. Sims' main assertion. It

*But," says an advocate of Dr. Long's, "It is now for the world to decide which constitutes the discovery, the first use or the first publication of the remedy." It seems to us that the merit lies neither in the first use nor the first publication, but in the first demonstration which proved that there *was* a discovery. We have proved that Dr. Long never made such a demonstration, for his process was imperfect; his anæsthesia incomplete. But if we restrict ourselves to a technical "first use," then Wright in 1829 was the discoverer, and he is entitled moreover to both use and publication.

is, "That Long was the first man to intentionally produce anæsthesia for surgical operations, and that this was done with sulphuric ether in 1842." In the light of historical facts already cited, and of Dr. Long's own utterances already quoted, this broad assertion falls flat in every direction. For, in the first place, Dr. Long was not "the first man to intentionally produce anæsthesia for surgical operations." Hundreds of men had preceded him, notably Esdaille, Hickman, Dauriol, Wright, and many others, in modern times, to say nothing of the far past. Nor, in the second place, was he the first to use ether—its stupefying effects by inhalation had been noted and recorded by many authorities. These effects had been utilized to annul pain by several of these; and more than this, Wright in 1829 had habitually employed ether vapor by inhalation to annul the pain of an operative procedure upon the external ear. If we ask why he did not push the matter and extend the application of ether, we may ask with equal reason the same question as regards Long.

And thirdly and finally, Dr. Long did not produce anæsthesia at all. He had no right to this word, borrowed from later and another's demonstrations, which does not apply to the transient and ephemeral "state" produced by the self-administration of ether common in "ether frolics." Dr. Long confesses that his anæsthetic state thus produced was too short for tooth-pulling even; for this reason he abandoned it—"deprived himself" of its use in these cases, and he saw no way out of his difficulty. He had not the slightest idea of the forced anæsthesia of to-day; he simply knew what every well informed medical man knew, that ether in small amounts by inhalation allayed sensibility to external impressions.* He might have read also, that in large doses it produced stupefaction,† but he never tried the forced and large dose.‡ Thus, the very foundation falls out from Dr. Sims' anæsthetic superstruction. At all points where well-known historical facts do not confute him, Dr.

*"I have in the cases put a teaspoonful of ether into a cup or evaporating dish, floating in a basin of warm water, and caused the patient to inhale the vapor by merely breathing over the dish, which, in almost every case, will allay the irritation." *Diseases of the Ear &c.*, by William Wright, Esq., Surgeon Aurist to her late Majesty Queen Charlotte, London, 1829. Quoted from Dr. Samuel Sexton, N. Y.

†Pereira and others.

‡Willhite, a student in Long's office, did this accidentally in 1839. The latter knew of the then considered dangerous stupor of an hour's duration produced by Willhite by a forced administration of ether, and this no doubt deterred him from repeating the process. Willhite seems to have suggested ether to Long; he was, indeed, Long's Jackson.

Long confutes himself. But Dr. Long's advocate pays little attention to the facts in the case. The aim of his exposition for Long is apparent. His appeal is to the uninformed, to the new generation, too indifferent or too occupied to do more than accept his fiat. His argument apparently is an attempt to befog the public mind—to so confuse and intermingle dates, actors and results, in the history of anæsthesia, as to cause the reader to doubt that there was any one central figure in the discovery far over-topping all others. He affects to distribute a certain amount of credit to all the parties to the ether controversy—to make them all in some way related and dependent one upon the other. He drags down those who are prominent, and elevates those otherwise. He ignores the fact that the perfect demonstration of 1846 differs from the experiments made in the same direction, and reduces all the parties to the controversy to one common level of experimenters. The whole affair is thus reduced to a simple question of priority of who was the first experimenter. It is no longer a question of results, but a simple question of time—of date. Here is the opportunity to insert Long, and we find him straightway included. Then, with the adroitness of a juggler, Long, Wells, Jackson and Morton are well mixed up; truth merges into fiction—facts become distorted into new relations, and suddenly, with a few clever passes, Long looms up from out the confusion labelled “discoverer of anæsthesia.” And the effect of the pose is heightened by the apparent air of truth which gives weight to the false impressions conveyed. The labors of Long and his co-workers is the new description which we get of the discovery of anæsthesia. We are asked to believe that in some mystical way Long was a “mutual laborer;” that he contributed as a “co-worker” to the invention of 1846, and finally he is called a “co-discoverer.” This is pure sophistry. Dr. Long was no more “a co-worker” than Dauriol, Hickman, Wright, or hundreds of the experimenters of the past. Either he invented or discovered anæsthetic inhalation, or he did not. No claim of contribution or participation in the result of 1846—the date of the world's real knowledge and practice of painless surgery—can for a moment be entertained, however ingeniously it has been presented.

But Dr. Sims having abolished the idea of results, and having established that of chronological sequence, makes now his final statement for Long. After giving the respective dates of Long's, Well's, Jackson's and Morton's efforts (1802, 1844, 1846), he says: "Thus we see that Long antedates Wells two years and eight months, and Morton and Jackson four years and six months." Where are these dates to be found? We challenge Dr. Sims to produce them. Neither Long, Wells nor Jackson have produced such a date, beyond what they said *after* 1846. They printed nothing, wrote nothing, submitted nothing to medical, scientific or other societies—nothing was known of this work. But after 1846 they affix dates to previous and early performances. Such dates are valueless. As well antedate a will, a deed, a public document or letter, and thus carry its contents and its provisions back a number of years—or bring forward an early unsigned and unwitnessed draft of such documents, and claim that its contents, signed, dated and witnessed at some day later than the properly-executed paper, are to supplant by reason of being thus "antedated," the published and thus attested document. Nobody antedates Morton in submitting the invention of anæsthetic inhalation to the scientific world, and through it to the public. And nobody has yet proved that they held in their hands knowledge of such value that if it had been submitted it would have been received as the "discovery of anæsthesia."

But several grave misstatements of facts contained in Dr. Sims' communication remain to be pointed out. Dr. Long's own statement of his "experiments in etherization," as he terms them, is that they numbered five—three in 1842, two of which were upon Venable, one in 1843, and one in 1845. Dr. Sims has wrongfully added *two* to this scant record—an addition of no inconsiderable importance, constituting, as it does, forty per cent. of the whole. Here is the evidence of this: Dr. Sims states, that "on the 9th of September, 1843, Dr. Long exsected, without pain, *three* small tumors from the head of Mrs. Mary Vincent." In recording this same incident of the 9th September, 1843, Dr. Long himself writes: "From one of these patients (Mrs. Vincent) I removed three tumors in one day; the inhalation of ether was used *only* in

the *second operation*. Comment upon this questionable procedure is unnecessary."

Again, much pains is taken to create the impression that Dr. Long "published the results of his experiment to the world." A sort of quibble in the use of the word publication is conveyed—this apparently for the purpose of keeping from view the fact that Dr. Long really published nothing in print until 1849. "He (Dr. Long) published it (the discovery) before all men," writes Dr. Sims, though we have this modification added, "True his was a very contracted world. He lived in an obscure little town where there were no railroads," etc. But we may ask, Was there no postoffice in this vicinity by which communication with the outer world could be attained? However, Dr. Long himself contradicts this idea of publication whether by print or public utterance. In the first place, he says: "The question will no doubt occur, Why did I not publish the results of my experiments in etherization soon after they were made? I was waiting to fully satisfy my mind," etc. And again, more explicitly, "the publication of etherization did not bide my time;" or again, "Had I been engaged in the practice of my profession in a city where surgical operations are performed daily, the discovery would no doubt have been confided to others who would have assisted in the experiments." Compare with this Dr. Sims' rendering: "Dr. Long's operations under ether were witnessed and known by all medical men in his neighborhood and by the whole community." The statement, therefore, that Dr. Long published the discovery before all men is manifestly untrue. The inconsistencies between Long and his expounders are irreconcilable, and they are but passing samples of the whole tenor of the exposition as compared with Long's original text.

A most inexcusable statement is the following: "In Boston, Mass, a monument has been erected to the 'discoverer of anæsthesia.'" This statement is untrue. The monument itself stands a silent but inexorable witness of its untruth. The inscription reads: "To commemorate the *discovery* that the inhalation of ether causes insensibility to pain. First proved to the world at the Massachusetts General Hospital, in Boston, October, 1846." "A citizen of Boston has erected

this monument." The word "*discoverer*" is not upon the monument. Futhermore, not one of the parties to the ether controversy went to this Hospital in October except Dr. Morton. His hand administered this ether referred to; he suggested the experiment, and it was made at his request, backed by the efficient aid of Prof. Henry J. Bigelow; and whatever knowledge of ether the surgeons of this hospital got in October, 1846, they got, as they have all sworn to, from Dr. Morton. But evidently it is not wished in this instance that this matter should be understood. The inscription is first falsified, and then the reader is further deluded by these words: "But no man is thereon designated by name," the implication being that the matter was left in doubt. Any citizen of Boston may erect, we suppose, a monument, putting thereon his own inscription. The monument, therefore, does not express the opinion of the city. But "first proved to the world," etc., in October, 1846, can obviously refer to no one but Dr. Morton. His deeds, though not his name, stand written thereon. No other name would fit into this inscription. It has never been claimed by any one that either Long, Wells or Jackson was present at this hospital demonstration in 1846. Dr. Morton was there. The inscription, then, refers to him, if to any of the four. And yet, with pleasant effrontery, it is suggested "that the names of Long, Wells, Morton and Jackson be inscribed on the Boston column, one on each side, as co-discoverers of anæsthesia."

But of many misstatements by implication, none is unkindier than to have drawn Dr. Morton into a comparison with the mental misfortunes of two of the claimants to the discovery. We quote: "Jackson has been for some time in an insane asylum, hopelessly incurable." "Wells, disappointed in carrying off the honor of the great discovery of anæsthesia, became insane and committed suicide in New York in 1848." "Morton, disappointed at not receiving a pecuniary recognition from Congress, fretted himself into a congestion of the brain. In July, 1868, he returned to New York from Washington in the wildest state of excitement," etc. As regards Morton, this is pure romancing. He had

not been in Washington for four years—not since 1864. Then follow other details, one of which is that Dr. Morton was taken moribund to St. Luke's Hospital, where he died an hour or two later. "How mournful the fate of these men," adds the chronicler. The first fruit of such a presentation of the cases was a statement in public print that Dr. Morton had "died half deranged in St. Luke's Hospital," the truth being that he died from an ordinary attack of cerebral congestion accompanying acute rheumatic fever, while driving in Central Park. His mind had never been disordered in the slightest degree up to the day of this attack. Simple justice demands this statement in a case where the commonest instincts of humanity should have forbidden an intrusion, particularly an erroneous and disingenuous one.

So much for the Long claim, old and new. It is the oft-repeated story of "priority"—the story of the host of after-claimants who first dabbled in an invention—not who first made it. The common consent of the world has already decided this question as regards other great inventions and discoveries. Who, for instance, first discovered and invented vaccination? The young country woman of Sudbury who said of small-pox, "I cannot take that disease, for I have had cow-pox;" the Duchess of Cleveland, who said that she had no fear about her beauty, for she had had disorder which would prevent her from ever catching the small-pox;* Benjamin Jesty, noted for having been the first person known that introduced the cow-pox by inoculation, and who made the experiment from the cow on his wife and two sons†—and this twenty-two years before Jenner gave the world vaccination. The country woman, the Duchess and Jesty were all familiar with the isolated fact, but Jenner had the genius and the perseverance to demonstrate that the fact held good not only once, but always—that the practice was safe, useful and applicable to the necessities of human kind. And he both proved this and found followers. And the world properly honors Jenner. Jenner made vaccination what it is. Morton made anæsthetic inhalation by ether what it is. Both generalized from single instances and popularized their inventions. Consecutive anæsthesias followed

*Quoted from Prof. Henry J. Bigelow.

†Quoted from Thomas F. Wood, M. D., *North Carolina Medical Journal*, October, 1879.

Morton's efforts, just as consecutive vaccinations followed Jenner's.

Hull, Arnal, the Earl of Stanhope, and Franklin, experimented with a view of propelling boats by steam. Fulton demonstrated, what they failed to do—that the process was practicable. And when aerial navigation becomes a fixed fact, who shall we say invented it—a King, a Wise, or what not aeronaut? the Montgolfier brothers who sent up the first balloon. Some one else before their time will be alleged to have flown a paper balloon, or, indeed, Icarus himself with his wax-fastened wings. Or shall we give the credit to the man whose air-ships made daily trips between New York and Boston?

But does not this question of "priority" carry its absurdity upon its face? Admit the claims made for Long to be tenable, and other prior experimenters will come forward and unseat him from his short-lived glory. And where is this retrogressive search for the paternity of painless surgery to cease? Already we have a Bowne, a Wilhite, Smyle and Esdaille—we will not repeat the long roll. And when their day, each in turn, is done, shall we next proceed to summon up in chronological order all the prominent figures in the far past who have intentionally endeavored to annul pain for surgical purposes? Such a search would lead us back to Adam himself, who was cast into a deep sleep to undergo the removal of a rib. Here surely priority may historically rest. And we may then accept anæsthesia as a good gift from God, first exercised upon Adam, and then lying in a crude form in the lap of time until re-discovered in Boston in A. D., 1846. We suggest the retrogressive plan above delineated to the expounder of Long's claim, who has already taken the three steps backward of Morton, Wells and Long.

But no, this question of priority is an unpractical one; this chase after the first man who intentionally produced, or attempted to produce, anæsthesia, as did Long for surgical operations, is a will-o'-the-wisp pursuit. It only ends in discomfiture.

And we may now ask, Who was the inventor of anæsthetic inhalation—Morton or some one of the after-claimants? The answer to this question has been resolved by

what has preceded into a simple question of definition. He is the discoverer or inventor who first proves his facts to his own satisfaction, who then proves them to science and to the world at large; who announces and makes them public; who alone, at the time, claims the invention and exhibits it; who, indeed, furnishes the facts which make it worth claiming; who assumes the responsibility of success or failure; who applies it to human affairs; who, in short, is alone known to be in any way connected and coincident with it. And he is not the discoverer or inventor who is proved merely to have been a prior experimenter in the same direction; who has made an inference, particularly an unrecorded one, or a suggestion, particularly a familiar one, or noted a fact and not verified it by actual demonstration, nor made any application of it (Jackson); who has applied it to practice and not succeeded, by reason of defects in knowledge and in method, or succeeded even in isolated instances, and not recognizing success has abandoned it (Wells and Long).

It would be well if we could find out *who* first had the idea of purposely annulling the pain of surgical operations, or who first suggested and made a single or several applications of this idea to surgery. But such a search is futile; we can never find out this first man. Common sense, history, scientific precedent, the law of the land—all tell us that this plan is impracticable—that we never shall know who first produced insensibility to pain for surgical operations. The idea is as old as historical record—the attempt to apply the idea had been made hundreds of times. The more the subject is examined, the more certainly does it come to light that artificial anæsthesia has been the dream of all ages, the chimera which many had been in search of, which many had essayed, and as many failed in reaching. There can be no credit to any modern man in the idea—the inference from a self-administration, or an attempt not followed by any one else and abandoned by its author. Such attempts are numbered by the hundreds; they do not constitute invention, but fall far short of it. To become an invention, such attempts should, by means of demonstration and proof, be put in such form that others (the world at large) could comprehend, repeat and follow the method in practice. Until then such at-

tempts are practically nothing—dreams, unverified theories, inferences, guesses, failures. Anæsthetic inhalation was to be proven—not inferred and demonstrated, not partially, but perfectly, and application and success could follow such a demonstration. “He is not the first discoverer or inventor who first recognizes a fact, but he who having recognized it proves it and publishes it to the world.”* And the highest authorities confirm this view.

Let us, then, award the credit to the man who had the hardihood, the courage to face trammelled science by actual deed; who staked much on the throw of a die and won; who proved what never yet had been proved; demonstrated what never yet had been demonstrated, and applied what yet knew no application; who gave to the world a new mode of procedure—the invention of anæsthetic inhalation. He found the practice of ether inhalation an amusement of chemical lecture-rooms and schools; he left it the sovereign antidote of the human race in its moments and hours of agony. He found ether stupor as hazardously uncertain as was the narcotism produced by pouring down the opium “*à boire*” of Canappe; he left it as manageable and safe as the sleep that follows a dose of laudanum.†

There is yet another monument—a simple marble shaft erected in Mount Auburn Cemetery by citizens of Boston. And we believe the inscription on it reflects the verdict of posterity. On its four faces may be read: W. T. G. Morton, *Inventor and Revealer of Anæsthetic Inhalation. Before whom in all time surgery was agony. By whom pain in surgery was averted and annulled. Since whom science has control of pain.*

Correspondence.

A Peculiar Intestinal Entozoa.

Mr. Editor,—I send you by mail an *animal* or *beast* which was discharged *per anum* by a young man in this community, aged 23. The history of the case, as given me by the young

*C. S. Briggs, *Nashville Journal of Medicine and Surgery*, October, 1879. Editorial against claims made for Long.

†Prof. Henry J. Bigelow, *History of Anæsthesia*, *op cit.*

man's father, is as follows: Last fall, two years ago, he was taken with pneumonia, from which he never recovered. In the spring of 1876, his father came to my office and desired me to give his son some medicine for "night sweats," which I did without seeing the patient. From that time to the last of March, 1877, or the first of April, I never saw or heard anything of the young man. About this latter date, he came to my office for treatment. I examined him and found him in a very emaciated condition, with a troublesome cough, exhausting expectoration, anorexia, and upon physical examination, I pronounced the disease phthisis pulmonalis. From that time the patient grew worse, and I had lost sight of him until Saturday, July 14, 1877, when his father brought me the "grub worm" I send you. He brought at the same time a small white grub resembling the grubs you may find between the wood and bark of old pine logs. I regret very much that he has destroyed the grub, and consequently I cannot send it to you.



Mr. Sawyer (the father) thinks that Wesley, his son, may have been discharging these things for some time, but as he had no chance to examine his discharges, and suspecting nothing of the kind, he never discovered any until Tuesday, July 10, 1877, when it became necessary to put "hippings" to him to receive the discharges from the bowels. On removing the first cloth, he discovered one of the small grubs spoken of above, and the patient has been discharging them ever since. This grub is about one-fourth of an inch long, about the size of a small goose quill, and perfectly white. On Thursday, July 12, 1877, the "fellow" I now send was discharged, accompanied with severe dysenteric pains. After its discharge the pains entirely ceased. On Friday he discharged another one-third larger than the one I send, but it was mashed between the patient's hips and the bed, and Sawyer threw it away.

You will notice at the caudal end of the beast something like a sting. When first expelled this could be ejected by it at will, and by worrying it such would be the case. On Saturday (July 14), when I saw Wesley, the insect stuck its

sting (?) into a piece of juniper wood with such force that its weight could be raised by it.

I regret very much that I cannot give you a more detailed account of the case, but from this time, I intend to watch it, and if anything more of interest occurs, I will report it.

The young man is troubled with an involuntary discharge from his bowels, with no dysentery, except when one of these "beasts" is being discharged.

There is a pulmonary abscess in the right lung, which appears externally just between the lower extremity of the scapula and spine. When this rises up in the form of a tumor his cough ceases; but when his cough breaks loose, the tumor subsides, and he expectorates a large quantity of purulent matter.

Yours, very respectfully,

South Mills, Camden Co., N. C. JNO. H. POOL, M. D.

[*Note by the Editor.*—This letter was not promptly published on receipt, because, in a private letter from Dr. Pool, the Doctor anticipated the early death of the patient, when it was hoped that a more definite opinion could be formed as to the habitat of the entozoa, etc. The patient, after the above letter was written, passed per rectum several other specimens like the one described in the letter. But when the patient died, a *post mortem* was not procurable.

The entozoa received by us from Dr. Pool several days after it had been passed, and which is well represented by the wood-cut—both as to size and features—when gently pressed upon the back, as by the pressure of a pencil would have distinct jerking motion, with a crackling sound, and with a momentary arching in of its back—its back then being markedly concave in outline. This vitality was manifested for at least two months after its receipt—although it was kept in a close tin box. About the time of its death, the small holes, about the size of pin heads, were seen in three different parts of its back and sides, which had all the appearances of being "worm-eaten holes." And such was the literal fact; for in the box were three small whitish worms, having all the external appearances of the parent—except as to size and color. The color of the parent entozoa was about that of the ordinary house roach.

This entozoa was exhibited at a meeting of the Richmond Academy of Medicine, and a brief history related by the Ed-

itor. But none of the gentlemen then present had ever before seen or known of such an intestinal parasite; nor since that time have we been able to find in the text-books or in our exchanges the description of anything similar to this intestinal "varmint"—as Dr. Pool styles it.]

Editorial.

A Congressional Bill Asking an Appropriation for the Discoverer of Anæsthesia, we learn, has been prepared by Hon. Alex. H. Stephens, which will soon be presented. This effort meets with our hearty approval, as we are confident it meets with the sympathy of the leading members of our profession throughout the country. To make the bill a success, we trust our subscribers will write to the Congressmen of their acquaintance, urging that some action should be taken in the premises. In this connection, we may appropriately quote the concluding paragraphs of the paper of Dr. J. Marion Sims, in our May number, 1877, on the "Discovery of Anæsthesia."

"I propose, then, that the whole medical profession—North, South, East and West—unite in asking Congress, at its next session, to appropriate this sum as an 'Anæsthesia Fund,' to be divided equally between the families of Long, Wells, Morton and Jackson.

"One hundred thousand dollars is a small sum to offer where men have sacrificed their lives for the good of the whole civilized world, leaving their families in straightened circumstances. How small this pittance when measured by the benefits these men conferred on the world!

"Let us, as Americans, rise above all party, all prejudice, all sectionalism, and demand of the Government this appropriation for the great work accomplished by these martyrs to science and humanity."

While upon this very subject, and after we had prepared the above paragraphs for an earlier number, the interesting, and, in many particulars, instructive paper, by Dr. Morton, came to hand; and because he attacks opinions already expressed by us, and still adhered to, and advances conclusions to which we cannot altogether agree, we have published his entire manuscript—without abridgement—in order that he may have the amplest opportunity to again present the claims of his lamented father as the "discoverer of anæsthesia."

While most cheerfully and unreservedly according to the late Dr. W. T. G. Morton every credit for assiduously impressing upon popular and professional attention the value of ether (although under a name and under a patent-right which, in itself, is not recognized as professionally legitimate) as an anæsthetic in 1846, and in after years as well, we do not find in the paper contributed to this number anything to disprove the main statements made by Dr. J. Marion Sims in the May No., 1877, of this journal, which gave prominence to the fact that the late Dr. Crawford W. Long, of Athens, Ga., was the real discoverer of modern surgical anæsthesia by ether; and that he used ether as a surgical anæsthetic more than five times is shown by affidavits of other witnesses, which have been published at different times in this journal, and of still other witnesses which have not been specifically published in journals. And that Dr. Long imparted his discovery—although accidentally obtained, as first carried into practical effect in 1842—to his professional brethren, and others in his community, without attempting to conceal the fact, or restraining others, by a patent-right on ether as an anæsthetic, from using the agent, or by any effort at concealment of the popular name of the agent by which he obtained surgical anæsthesia, cannot be denied.

Our contributor to this number, as the son of a claimant of the "invention," or, as we think a more proper term, *discovery* of anæsthesia, is to be reviewed gently for his unkind allusions to Dr. Sims, in that he changed opinions when newer and stronger evidences were presented to him than those upon which he first based the opinion long years ago, that Dr. W. T. G. Morton was the discoverer of surgical anæsthesia. One of the chief elements of the great success and renown of the already immortalized Sims is, that he is ever ready to surrender an opinion—whether original with himself, or presented by another—just so soon as he finds that the new suggestion is an *advance* upon an old idea. Not content to sit upon a stationary hobby, nor to remain behind, simply cherishing an idea or a sentiment, he is always in the front rank of progress, and is most frequently to be found in advance of theories and facts soon to be established.

The Medical College of Virginia held its commencement exercises on Tuesday, March 2d, 1880. It was a brilliant occasion. Hon. B. Johnson Barbour delivered the Annual Address to a densely crowded audience. The degree of Doctor of Medicine was then conferred upon the following

named gentlemen, all of Virginia: Benj. Munday, Chas. H. Chalkley, Alfred Leigh, Geo. T. Snead, C. L. Bunting, Barksdale Hales, F. S. Whaley, P. H. Lightfoot, B. P. Saunders, C. K. Gardner, James E. Cox, W. V. Nance, G. W. Richardson, A. L. Wellford, J. T. Humphreys, E. D. Campbell, F. W. Green, C. H. Moncure, G. H. Zimmerman, Wm. Fuller Gaskins.

The following gentlemen received the diploma of graduates in Pharmacy: Joseph E. Heaton, John H. Crone, A. E. Johan, W. R. Savage, — Conway.

Dr. Charles H. Chalkley received the Faculty prize for the best thesis; Dr. James T. Humphreys was appointed House Physician to the Retreat for the Sick.

The Sixth Annual Volume Closes with this number. During the last two months we have been much embarrassed by not issuing the journal on time; but this delay has been due to the "paper mills," and not to negligence on our part or our printers. The "Index of Contributors and their Articles," beginning on the next page, indicates, in a measure, some of the progress made by this journal during the past year. In this "Index" will be found the names of some *authors* in foreign countries, as also a goodly number well scattered throughout the United States. To those exchanges and journalistic friends who have courteously congratulated us, we are grateful. To those who have friendly criticized our conduct, and in a proper manner have proffered suggestions, we feel still more grateful; and, as shown by the proposed changes for the Seventh Volume, we shall profit by their advice, even at the sacrifice of our individual views.

The Spring Session of the Medical Society of Virginia will begin March 15th, and the prospects are favorable for a larger attendance of students than usual. We cannot too strongly urge upon all students who propose to attend the Winter Course, to attend also this spring and summer session.

Dr. Christopher Tompkins, of Richmond, Va., has been elected Professor of Anatomy in the Medical College of Virginia to fill the vacancy occasioned by the resignation of Dr. F. D. Cunningham. The College, in losing the valuable services of Dr. Cunningham, could not have made a better selection than has been made to fill the chair of Anatomy.

Dr. F. D. Cunningham, at the request of the Faculty of the Medical College of Virginia, has consented to deliver a practical course of lectures next winter on diseases of the eye and ear.

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(APRIL, 1879-MARCH, 1880, inclusive)

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The letter T preceding some of the figures refers to the paging of the **Transactions of the Medical Society of Virginia** (Part I of Volume III. This first part of Volume III of the **Transactions** was issued with the January number, 1880. But in binding this Volume VI of the **Medical Monthly**, the **Transactions** should be separated from the January number, 1880, of the journal, and be bound after the March number, 1880.

Notices of books, journals, deaths, personals, and proceedings of societies, etc., are indexed in the **Index of Subjects** under the respective words **Book Notices**, **Journalistic**, **Obituary Record**, **Personals**, and **Society and Health Board Proceedings**.

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